

13TVR60-S1  
JULY 96

**THOMSON CONSUMER ELECTRONICS**  
**TV/VCR Combination**  
**Supplemental Service Data**

**13TVR60**  
Additional Models:  
**13TVR70/19TVR60/T13060**  
**T13065/T13070/T19060**



Technical Publications  
P.O. Box 1976 / Indianapolis, Indiana 46206

**Purpose of This Supplement:** This is a Supplement to the 13TVR60 Basic Service Data. Included are updated schematics documenting recent production changes. The Replacement Parts List has been updated to include new models.

## SERVICE DATA INDEX

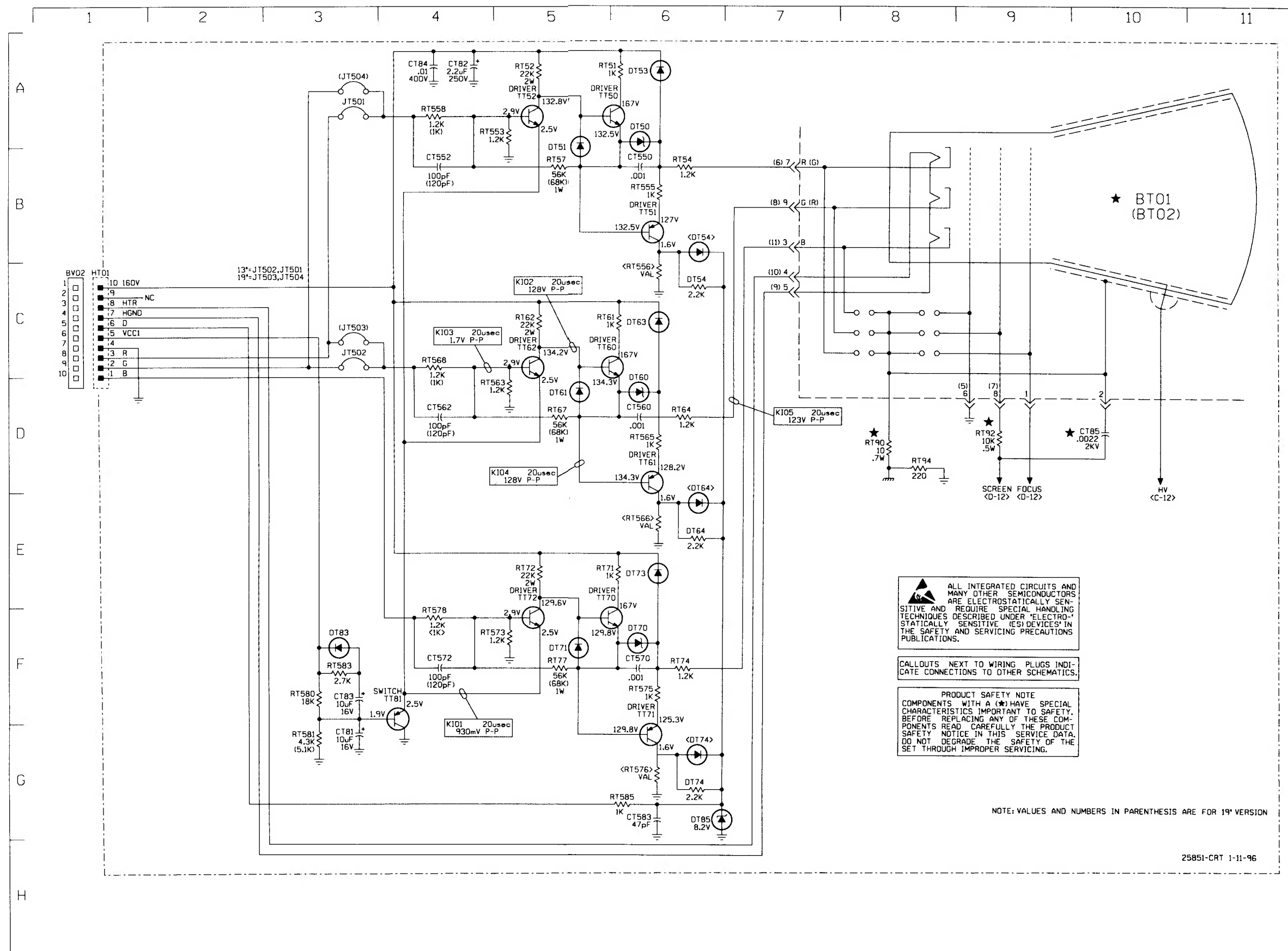
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Power Supply Schematic .....	2-1
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Video Schematic .....	2-3

## SAFETY NOTICE

### USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by stars ★ on schematics and on the parts list in this Service Data and its bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in the Basic Service Data.

## CRT DRIVER SCHEMATIC





ELECTRICAL ADJUSTMENTS (Continued)

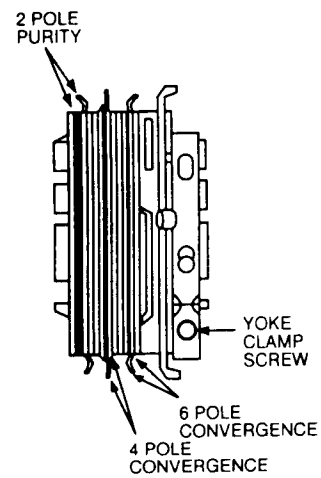


Fig. 6 - Purity/Convergence Magnets

9. Converge the red and blue vertical lines to the green vertical line at the center of the screen:
- a. Carefully rotate both tabs of the 4-pole ring magnet (simultaneously in opposite directions) from the 12 o'clock position to converge the red vertical line with the blue vertical line.
  - b. Carefully rotate both tabs of the 6-pole ring magnet (simultaneously in opposite directions) from the 12 o'clock position to converge the magenta (red/blue converged) vertical line with the green vertical line.
10. Converge the red and blue horizontal lines to the green horizontal line at the center of the screen:
- a. Carefully rotate both tabs of the 4-pole ring magnet (simultaneously in the same direction to maintain the spacing between the tabs) from the 12 o'clock position to converge the red horizontal line with the blue horizontal line.
  - b. Carefully rotate both tabs of the 6-pole ring magnet (simultaneously in the same direction to maintain the spacing between the tabs) from the 12 o'clock position to converge the magenta (red/blue converged) horizontal line with the green horizontal line.
11. Secure the 4-pole and 6-pole magnets by tightening the beam bender locking ring.
12. While viewing the 6 o'clock and 12 o'clock areas on the screen, rock the front of the yoke vertically (up/down) to converge the red and blue vertical lines (see Fig. 7). Temporarily place a wedge at the 12 o'clock position to hold the vertical position of the yoke.

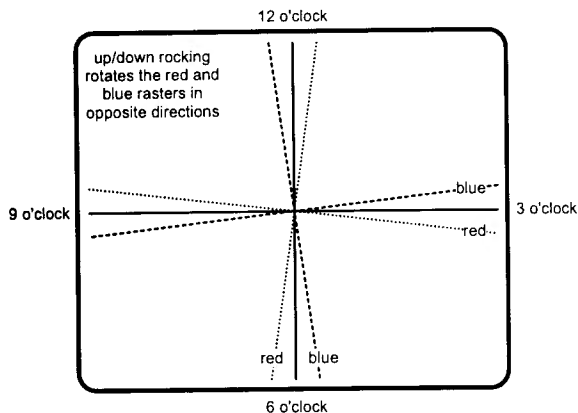


Fig. 7 - Yoke Tilt Adjustment

13. Check the 3 o'clock and 9 o'clock areas to confirm that the red and blue horizontal lines are converged. If the lines are not converged, slightly offset the vertical tilt of the yoke to balance the misconvergence of the horizontal lines at 3 o'clock and 9 o'clock with the misconvergence of the vertical lines at 6 o'clock and 12 o'clock.
14. Place a 1.5 inch piece of glass tape over the foot of the 12 o'clock wedge. *Do not allow the wedge or tape to contact the coated area around the anode lead.*
15. While viewing the 6 o'clock and 12 o'clock areas on the screen, rock the front of the yoke horizontally (left/right) to converge the red and blue horizontal lines (see Fig. 8). Temporarily place wedges at the 4 o'clock and 8 o'clock positions to hold the horizontal position of the yoke.

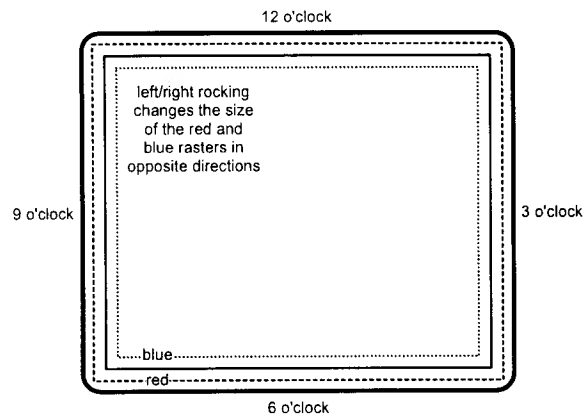


Fig. 8 - Yoke Tilt Adjustment

16. Check the 3 o'clock and 9 o'clock areas to confirm that the red and blue vertical lines are converged. If the lines are not converged, slightly offset the horizontal tilt of the yoke to balance the misconvergence of the vertical lines at 3 o'clock and 9 o'clock with the misconvergence of the horizontal lines at 6 o'clock and 12 o'clock.
17. Place a 1.5 inch piece of glass tape over the foot of the 4 o'clock and 8 o'clock wedges.

Setup Mode/EEPROM Verification

This procedure allows setup and/or verification of the data stored in the EEPROM. If the data stored in the EEPROM is incorrect, some functions/features may not be available.

1. Make sure that there is not a cassette tape in the instrument.
2. Remove the AC power from the VCR.
3. Press and hold the *Channel Up* and *Down* buttons simultaneously.
4. While still holding the *Channel Up* and *Down* buttons as described in step 3, apply AC power to the VCR.
5. A few seconds after the "Service Setup OSD" appears, release the *Channel Up* and *Down* buttons.

ELECTRICAL ADJUSTMENTS (Continued)

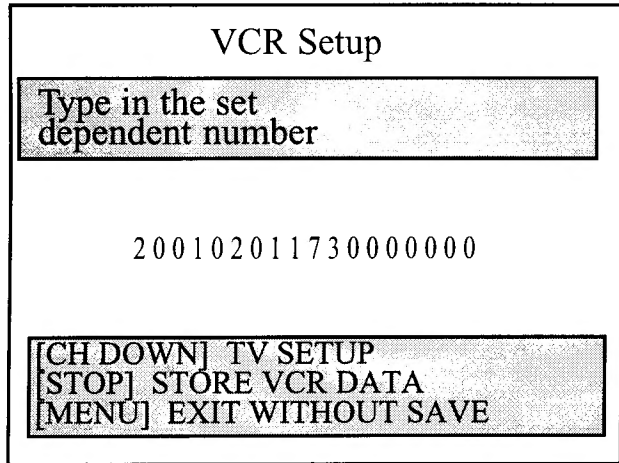


Fig. - 9 VCR Setup Menu

6. Verify that the EEPROM data reads as follows:

GE 2HD 200102011730000000  
GE 4HD 200102011770000000  
RCA 2HD 200112001730000000  
RCA 4HD 200112011770000000

7. If the EEPROM data is correct, press the *Program* button on the remote control hand unit to display the Main Menu or press the *Channel Down* button to select the first TV Setup menu. Use the *Channel Up/Down* buttons on the remote to select the different menu adjustments. Use the *Volume Up/Down* buttons to adjust the value of a selected adjustment.
8. If the EEPROM data is incorrect, use the *Number Keys* on the remote control hand unit to enter the correct EEPROM data.
9. To save the EEPROM data, press the *Stop* button on the remote control hand unit. The VCR microprocessor will store the data in the EEPROM and then power off the VCR.

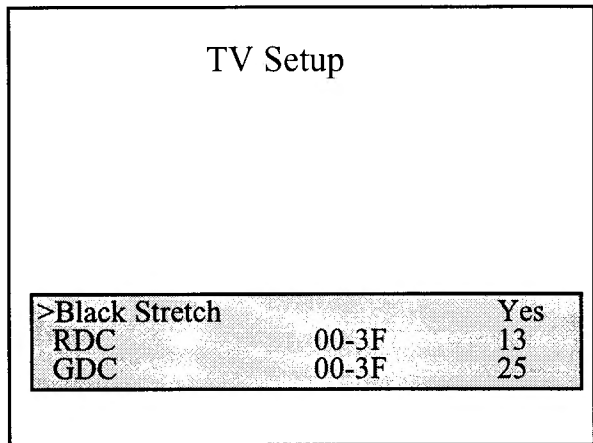


Fig. - 10 TV Setup Menu 1

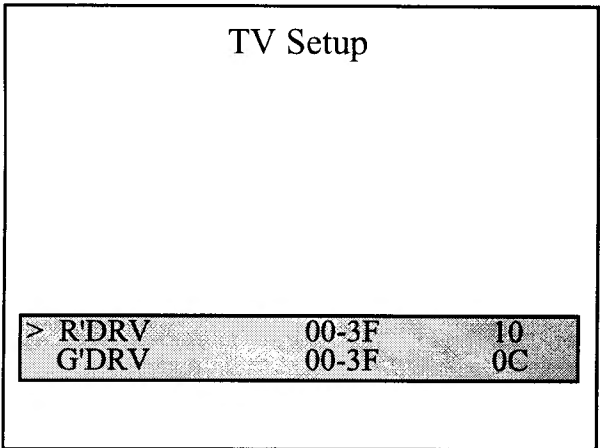


Fig. - 11 TV Setup Menu 2

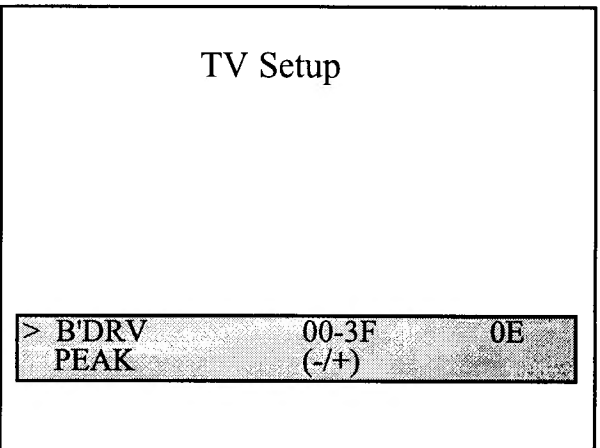


Fig. - 12 TV Setup Menu 3

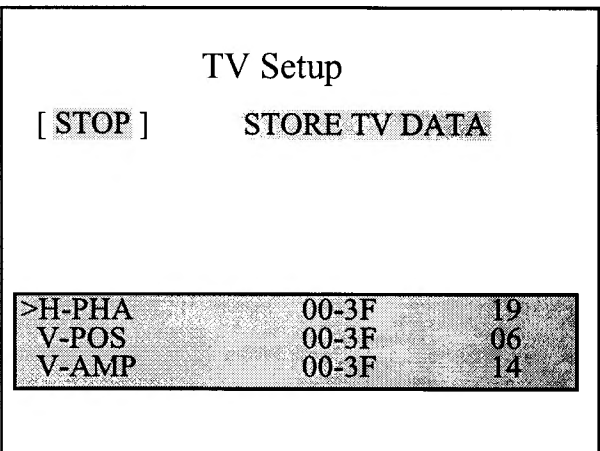


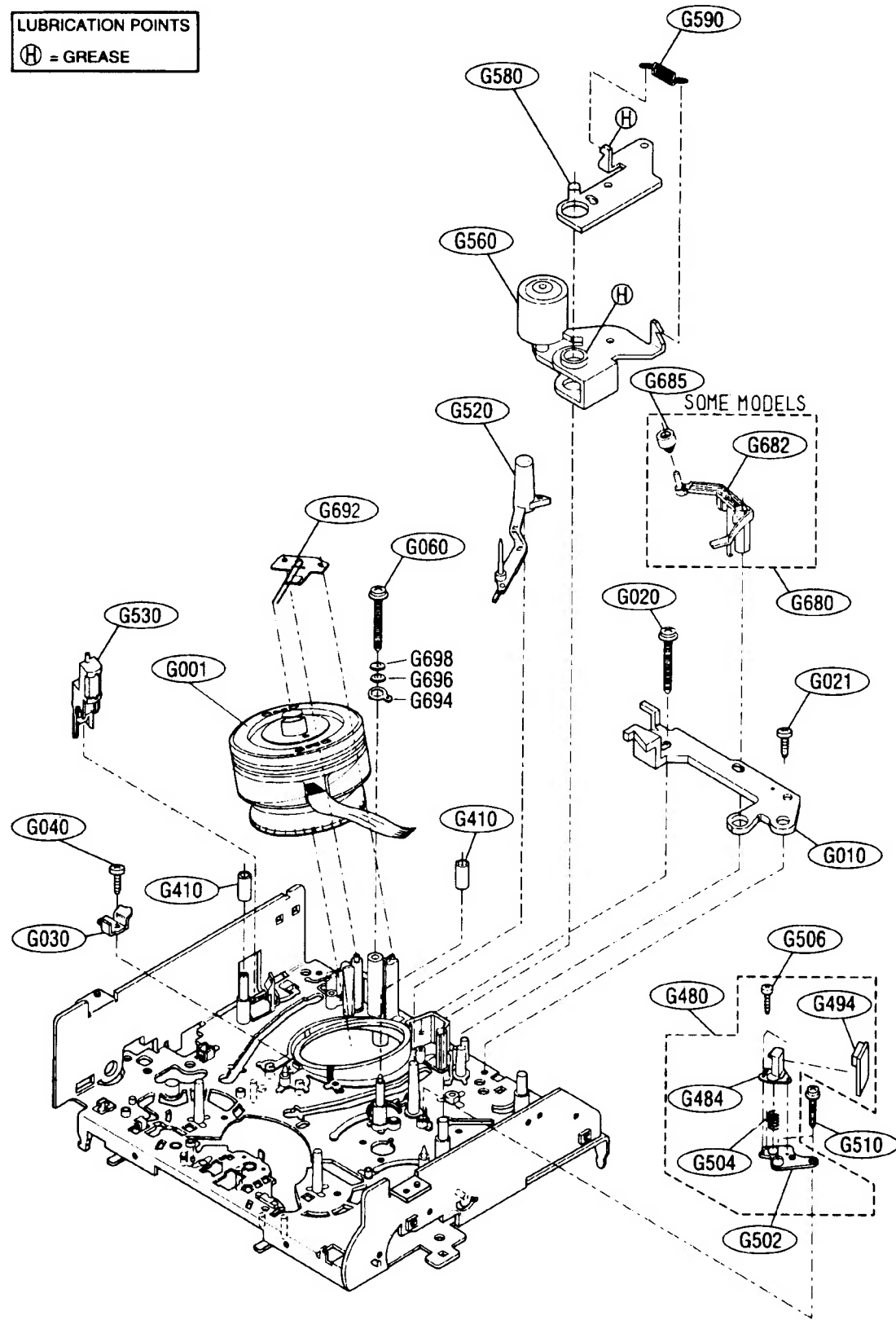
Fig. - 13 TV Setup Menu 4

10. Confirm all features/functions after completing the procedure.

1-P1  
TRANSPORT MECHANISM EXPLODED VIEW  
(1 of 2)

MECHANICAL PARTS (1)

LUBRICATION POINTS  
H = GREASE

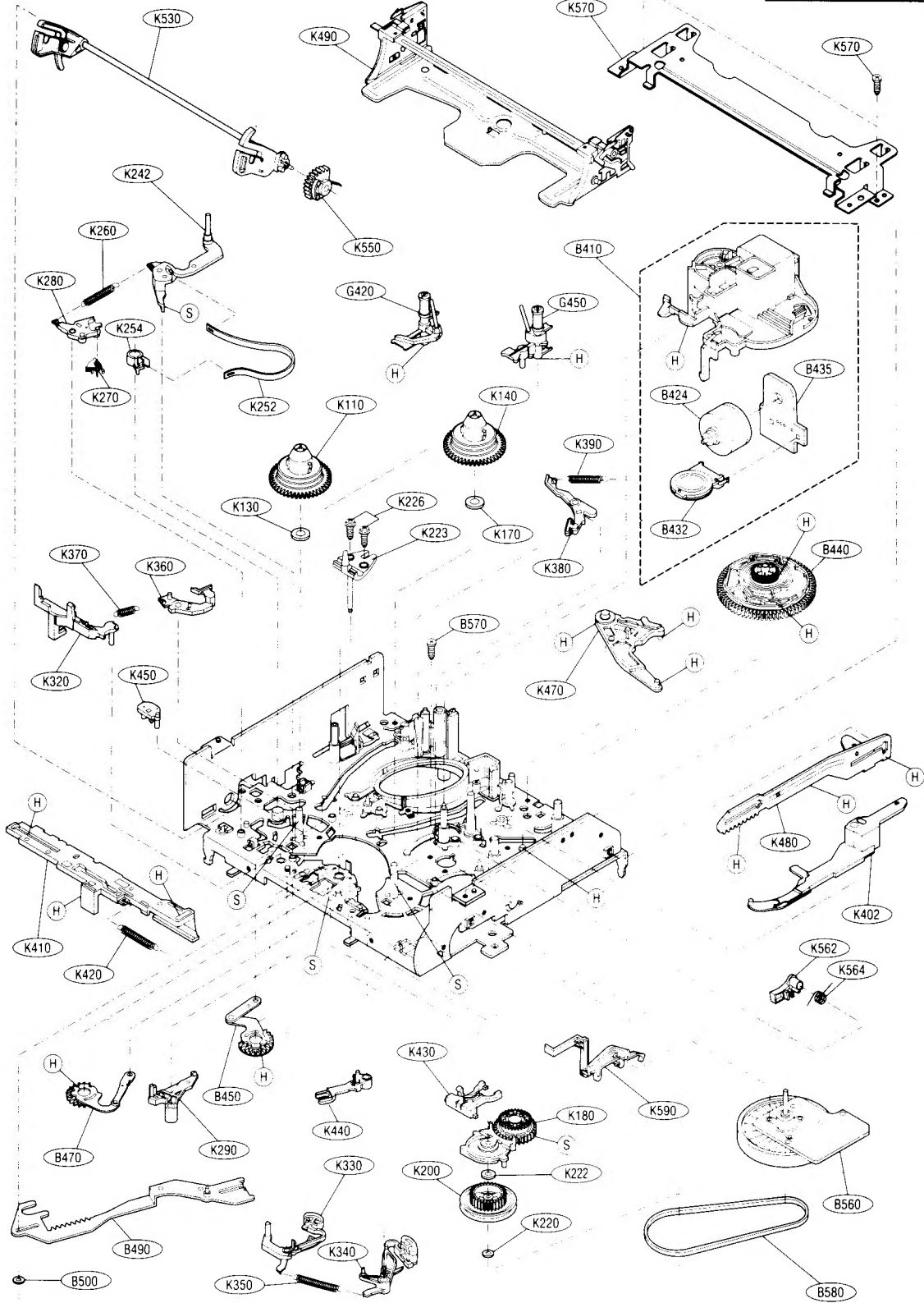


1-P2  
TRANSPORT MECHANISM EXPLODED VIEW  
(2 of 2)

MECHANICAL PARTS (2)

LUBRICATION POINTS  
H = GREASE  
S = OIL

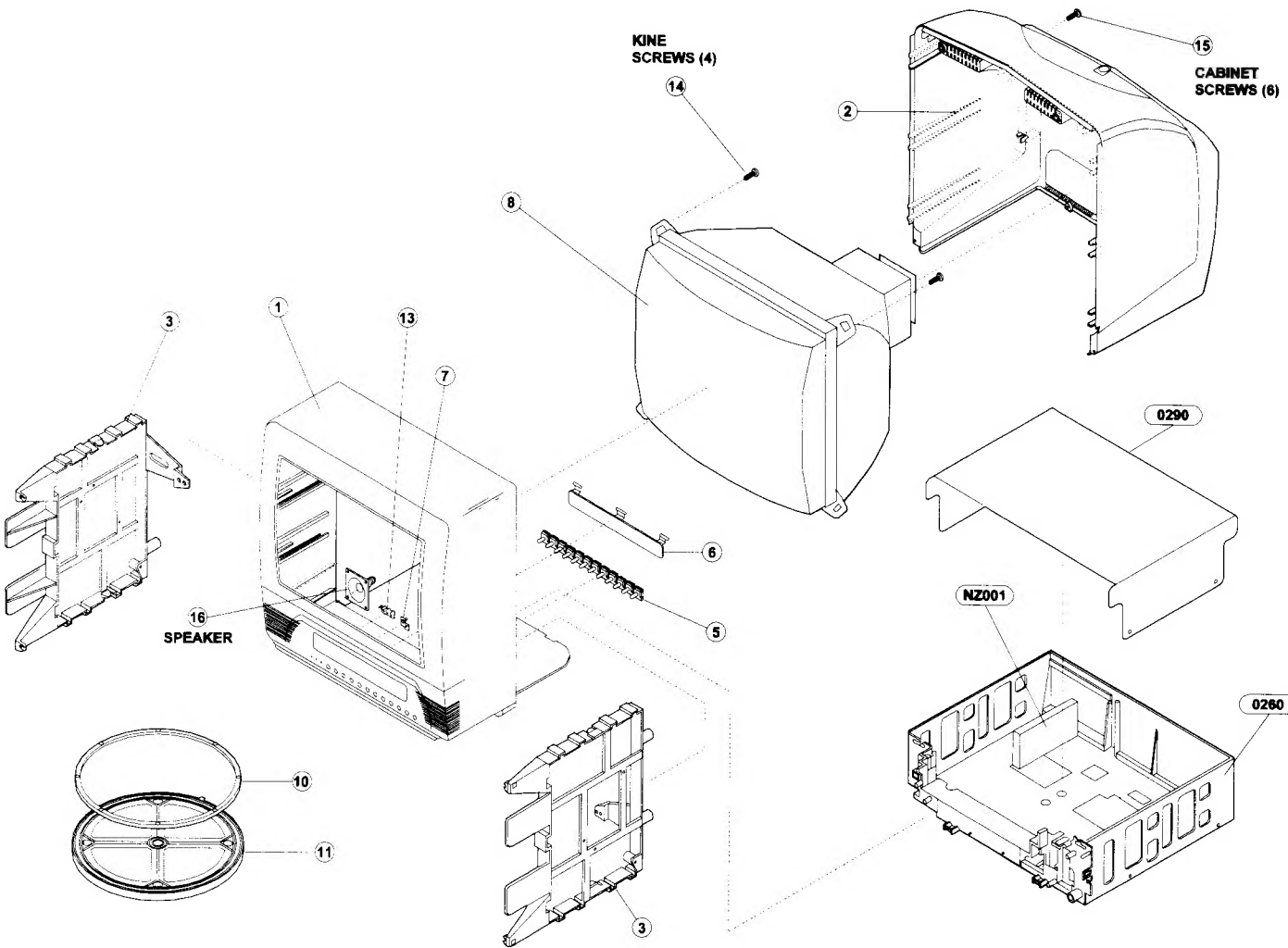
SOME PARTS WITH ITEM NUMBERS ON EXPLODED VIEWS MAY NOT BE AVAILABLE SEPARATELY, OR MAY BE AVAILABLE ONLY AS PART OF AN ASSEMBLY.



1-P3

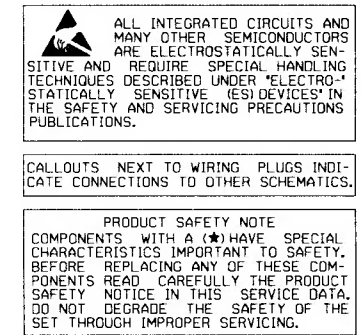
1-P4

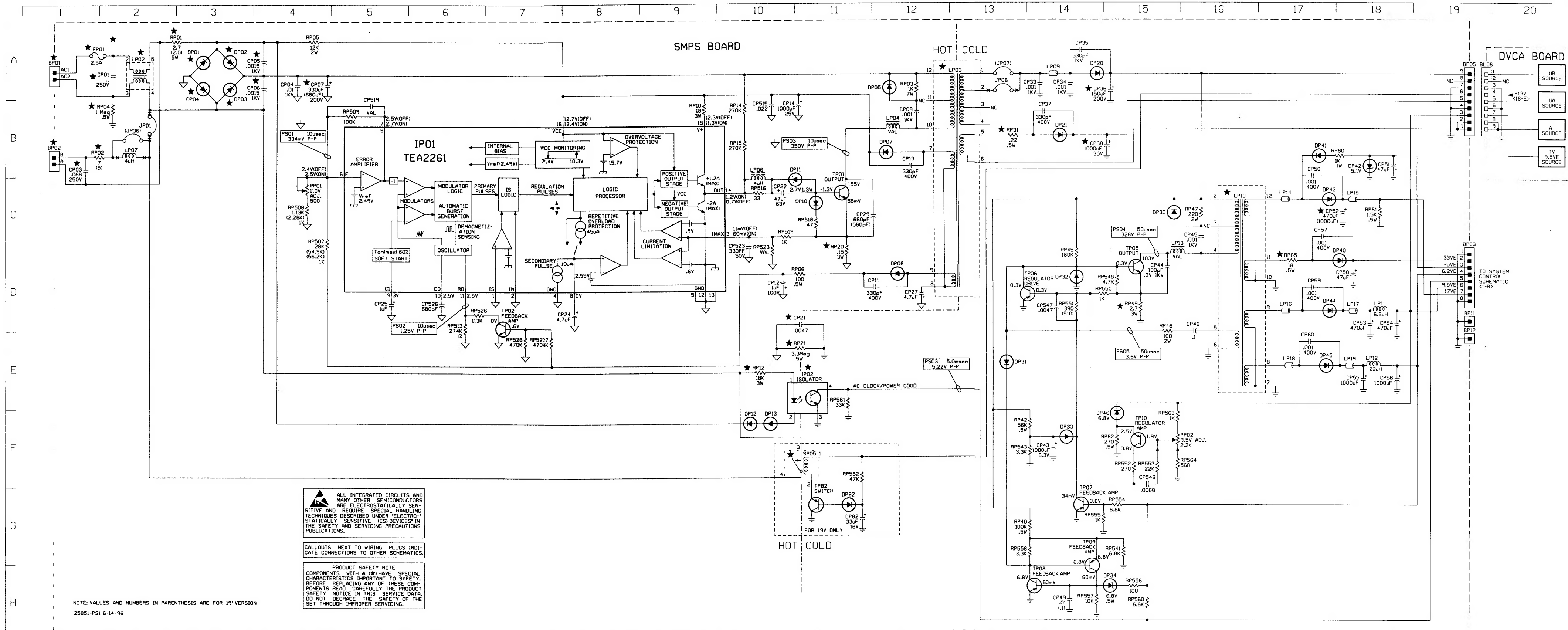
INSTRUMENT ASSEMBLY EXPLODED VIEW



1-P4

1-P8







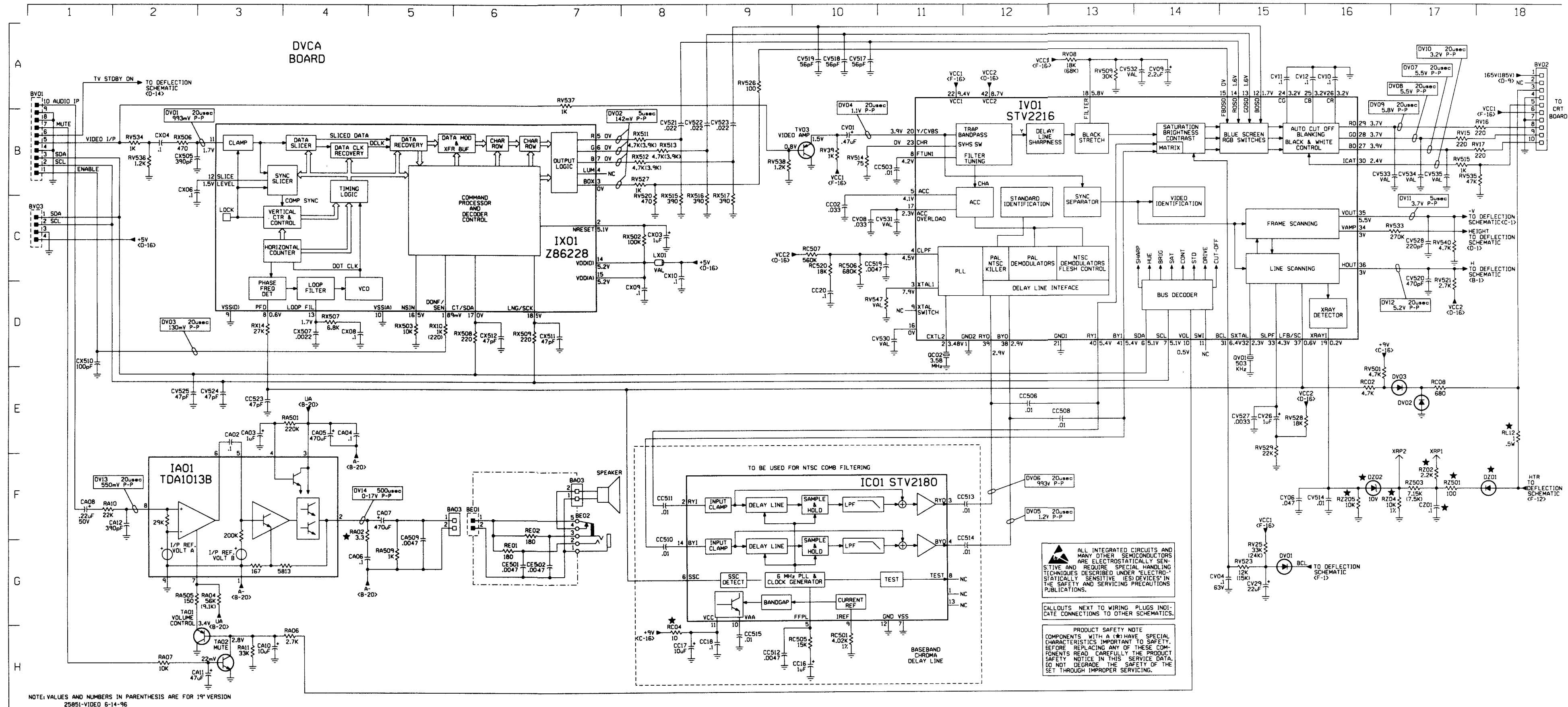






PART OF  
IT001  
TMP90DR74





## REPLACEMENT PARTS

## BEFORE REPLACING PARTS, READ THE FOLLOWING:

**Approved Substitute Stock Numbers**—Before ordering stock numbers in the parts list, look for an approved substitute stock number in the current Price Schedule. This will minimize your service time and avoid ordering parts you already have in stock.

**PRODUCT SAFETY NOTE**—Components marked with a (\*) have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** in the basic service data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a (\*), replacement of assemblies with other assemblies not approved may result in a safety hazard.

**Warranty Status of Assemblies and Parts**—All assemblies and components shown in this parts list are eligible for warranty exchange or replacement except those with a dot (•) shown to the left of the Description. Assemblies and components with a dot (•) to the left of the Description are NOT eligible for warranty exchange or replacement.

Warranty replacement of cabinet parts requires the approval of a Thomson Consumer Electronics Field Service Manager.

Warranty Status and Specifications of assemblies and components are subject to change without notice. Consult the TCE Parts Pricing Microfiche for the latest warranty status information.

**@NOTE:** When ordering components that are listed more than once in this parts list, always adhere to the serial number application guidelines given in the description column. If a serial number application guideline is not given, always select the component with a value, rating, other specification or identification marking(s) that match those of the corresponding component in the instrument you are servicing.

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
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## SUPPLEMENT 1

MODEL	TV CHASSIS	VCR CHASSIS
13TVR60F01	TVR1	VCR2A
13TVR60C01	TVR1	VCR2A
13TVR70F01	TVR1	VCR2A
19TVR60C01	TVR2	VCR2A
19TVR60F01	TVR2	VCR2A
T13060GYF01	TVR1	VCR2B
T13065BCF01	TVR1	VCR2B
T13070WHF01	TVR1	VCR2B
T19060GYF01	TVR2	VCR2B

## TV SECTION

## CHASSIS TVR1/TVR2 ELECTRICAL ASSEMBLIES

CIRCUIT, KINE DRIVE  
(SEE KINE DRIVE CBA)  
CIRCUIT, DVCA  
(ONLY COMPONENT  
PARTS AVAILABLE)  
CIRCUIT, SMPS  
(ONLY COMPONENT  
PARTS AVAILABLE)  
CIRCUIT, TUNER SEE  
NZ001 (VCR SECTION)  
CIRCUIT, KEYBD/DISPLAY  
(SEE VCR SECTION)

## ELECTRICAL COMPONENTS

BA03	232317	11038995	CONNECTOR 2 PIN HEADPHONE CIRCUIT
BE01	232328	20425540	CIRCUIT HEADPHONE/SPKR
BE02	232318	40432230	SOCKET HEADPHONE JACK
BE03	210618	40406081	CONNECTOR 2 PIN SPEAKER
BL02	198542	70181000	CONNECTOR 3 PIN HORIZ YOKE
BL06	232319	80448070	CONNECTOR 9 PIN SMPS BOARD

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
BP01			CABLE, AC CORD (SEE MECHANICAL PTS-VCR)
BP03	211594	67138110	CONNECTOR 8 PIN VCR
BP05	232319	80448070	CONNECTOR 9 PIN DVCA BOARD
BV01	211596	67138210	CONNECTOR 10 PIN HD AMP
BV02	232320	10015460	CONNECTOR 10 PIN CRT DRIVER
BV03	232321	80445660	CONNECTOR 4 PIN
CA02	200141	20467040	CAP POLY .1UF K 63V
CA03	194673	10120960	CAP LYTC 1UF M 50V
CA04	200141	20467040	CAP POLY .1UF K 63V
CA05	207855	13089330	CAP LYTC 470UF M 25V
CA06	200141	20467040	CAP POLY .1UF K 63V
CA07	207855	13089330	CAP LYTC 470UF M 25V
CA08	224166	13074560	CAP LYTC .22UF M 50V
CA10	194557	13082060	CAP LYTC 10UF M 50V
CA11	193043	13070520	CAP LYTC 47UF M 25V
CA12	232329	13069020	CAP POLY 1000PF K 63V TVR1/TVR2 (SEE NOTE@)
CA12	235503	15001520	CAP POLY 4700PF J 63V TVR1 (SEE NOTE@)
CA12	235512	15001390	CAP POLY 3300PF J 63V TVR2 (SEE NOTE@)
CA509	230964	15005770	CAPCC 4700PF M Y5R 16V
CC02	232344	13091070	CAP POLY .33UF K 63V
CC20	200141	20467040	CAP POLY .1UF K 63V
CC503	206194	15004870	CAPCC .01UF M Y5S 16V
CC506	206194	15004870	CAPCC .01UF M Y5S 16V
CC508	206194	15004870	CAPCC .01UF M Y5S 16V
CC519	230964	15005770	CAPCC 4700PF M Y5R 16V
CC523	232345	15005760	CAPCC 47PF J SL 50V
CE501	230964	15005770	CAPCC 4700PF M Y5R 16V (SEE NOTE @)
CE501	206194	15004870	CAPCC .01UF M Y5S 16V (SEE NOTE @)
CE502	230964	15005770	CAPCC 4700PF M Y5R 16V (SEE NOTE @)
CE502	206194	15004870	CAPCC .01UF M Y5S 16V (SEE NOTE @)
CF03	232346	13070890	CAP LYTC 100UF M 35V
CF04	190520	70427650	CAP POLY .22UF K 63V
CF05	232348	10122860	CAP LYTC 1000UF M 25V
CF06	220624	13039330	CAP LYTC 100UF M 25V
CF09	200141	20467040	CAP POLY (MF).1UF J 63V (SEE NOTE@)
CF09	232352	20564600	CAP POLY .1UF J 63V (SEE NOTE@)
CF10	200141	20467040	CAP POLY (MF).1UF J 63V (SEE NOTE@)
CF10	232352	20564600	CAP POLY .1UF J 63V (SEE NOTE@)
CF22	220624	13039330	CAP LYTC 100UF M 25V

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
CF502	230969	15005190	CAPCC 1000PF K Y5P 50V
CF511	206196	15005390	CAPCC .022UF Z Y5V 25V
CF521	206196	15005390	CAPCC .022UF Z Y5V 25V
CL01	200141	20467040	CAP POLY .1UF K 63V
CL03	198575	15001120	CAP POLY .01UF M 63V (SEE NOTE @)
CL03	198586	13068460	CAP POLY 6800PF K 63V (SEE NOTE @)
CL04	232534	11007716	* CAP POLY 6200PF E 1.6KV (SEE NOTE @)
CL04	198562	80304700	* CAP POLY 6600PF HP 1.6KV (SEE NOTE @) TVR1
CL04	235467	20079340	* CAP POLY 6800PF HP 1.6KV TVR2
CL05	232358	20053100	CAP POLY .39UF J 250V TVR1
CL05	235469	43401600	CAP POLY .47UF J 250V TVR2
CL06	232361	13076980	CAP POLY .68UF M 160V
CL08	232362	20467090	CAP POLY 6800PF K 100V (SEE NOTE @)
CL08	225439	15001610	CAP POLY 6800PF K 400V (SEE NOTE @)
CL10	230972	14035840	CAPCD 330PF M Y5U 1KV
CL11	232363	13075220	* CAP LYTC 47UF FS 250V
CL12	225628	20298330	CAPCD .01UF M 250V
CL13	230957	13039530	CAP LYTC 1000UF M 16V
CL14	198575	15001120	CAP POLY .01UF M 63V
CL15	230972	14035840	CAPCD 330PF M Y5U 1KV
CL16	230958	13039590	* CAP LYTC 1000UF M 35V
CL17	230966	14002220	CAPCD 330PF M Y5R 400V
CL19	232364	13040240	CAP LYTC 47UF M 35V
CL20	232365	70427760	CAP POLY .022UF K 100V
CL21	194557	13082060	CAP LYTC 10UF M 50V
CL30	232366	14001660	CAPCD .01UF FS Y5U 1KV
CL502	230968	15005750	CAPCC 470PF K Y5P 50V
CL522	206194	15004870	CAPCC .01UF M Y5S 16V
CP01	220625	20157420	* CAP PMF .1UF M 250V
CP03	220627	13028880	* CAP POLY .068UF M 250V
CP04	232366	14001660	* CAPCD .01UF FS Y5U 1KV
CP05	198565	20338740	* CAPCD 1500PF K Y5P 1KV
CP06	198565	20338740	* CAPCD 1500PF K Y5P 1KV
CP07	182286	20552180	* CAP LYTC 330UF M 200V TVR1
CP07	190560	80434450	* CAP LYTC 680UF M 200V TVR2
CP09	232367	20388780	CAPCD .001UF M Y5R 1KV
CP11	230966	14002220	CAPCD 330PF M Y5R 400V
CP12	232368	13070920	CAP LYTC 1UF M 100V
CP13	230966	14002220	CAPCD 330PF M Y5R 400V
CP14	232348	10122860	CAP LYTC 1000UF M 25V
CP21	232370	10109980	* CAPCD .047UF M 400V (SEE NOTE @)
CP21	232782	20574210	* CAP POLY .047UF M Y5V 125V (SEE NOTE @)
CP22	230980	13070750	CAP LYTC 47UF M 50V (85DEG)(SEE NOTE @)
CP22	193043	13089920	CAP LYTC 47UF M 50V (105DEG)(SEE NOTE @)
CP24	230973	13074920	CAP LYTC 4.7UF M 50V
CP25	194673	10120960	CAP LYTC 1UF M 50V
CP27	230973	13074920	CAP LYTC 4.7UF M 50V
CP29	232371	20505600	CAPCD 680PF K Y5P 1KV TVR1
CP29	235470	20537750	CAPCD 560PF K Y5P 1KV TVR2
CP33	198565	20338740	CAPCD 1500PF K Y5P 1KV
CP34	198565	20338740	CAPCD 1500PF K Y5P 1KV
CP35	230972	14035840	CAPCD 330PF M Y5U 1KV
CP36	232372	20432970	CAP LYTC 150UF M 200V
CP37	230961	14002190	CAPCD 330PF K Y5P 400V
CP38	230958	13039590	CAP LYTC 1000UF M 35V
CP43	232373	13076520	CAP LYTC 1000UF M 6.3V
CP44	232374	14035850	CAPCD 100PF FS Y5U 1KV
CP45	232367	20388780	CAPCD .001UF M Y5R 1KV
CP46	153925	20467110	CAP POLY .1UF K 100V
CP49	198575	15001120	CAP POLY .01UF M 63V (SEE NOTE @)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
CP49	200141	20467040	CAP POLY .1UF K 63V (SEE NOTE @)
CP50	193043	13089920	CAP LYTC 47UF M 50V
CP51	193043	13089920	CAP LYTC 47UF M 50V
CP52	232375	10173540	* CAP LYTC 470UF M 25V (SEE NOTE @)
CP52	201162	20467900	* CAP LYTC 1000UF M 25V (SEE NOTE @)
CP53	232375	10173540	CAP LYTC 470UF M 25V
CP54	232376	13040050	CAP LYTC 470UF M 16V
CP55	232380	10173530	CAP LYTC 1000UF M 16V
CP56	185862	13039570	CAP LYTC 1000UF M 16V
CP57	222523	14034350	CAPCD 1000PF K Y5R 400V
CP58	222523	14034350	CAPCD 1000PF K Y5R 400V
CP59	222523	14034350	CAPCD 1000PF K Y5R 400V
CP60	222523	14034350	CAPCD 1000PF K Y5R 400V
CP82	176851	13070490	CAP LYTC 33UF M 16V
CP515	206196	15005390	CAPCC .022UF Z Y5V 25V
CP519	230968	15005750	CAPCC 470PF K Y5P 50V
CP523	230967	15005590	CAPCC 330PF K Y5P 50V
CP526	232378	15005910	CAPCC 680PF K Y5P 50V
CP547	230964	15005770	CAPCC 4700PF M Y5R 16V (SEE NOTE @)
CP547	232379	15005930	CAPCC 6800PF M Y5R 16V (SEE NOTE @)
CP548	232379	15005930	CAPCC 6800PF M Y5R 16V
CV01	189983	13074220	CAP LYTC .47UF M 50V
CV02	194253	15002560	CAP LYTC 22UF M 16V
CV03	232418	11055410	CAPCD 150PF J N150 50V
CV04	200141	20467040	CAP POLY .1UF K 63V
CV05	232376	13040050	CAP LYTC 470UF M 16V
CV06	200153	30935470	CAP POLY .047UF K 63V
CV08	232344	13091070	CAP POLY .33UF K 63V
CV09	230977	15002760	CAP LYTC 2.2UF M 50V
CV10	200141	20467040	CAP POLY .1UF K 63V
CV11	200141	20467040	CAP POLY .1UF K 63V
CV12	200141	20467040	CAP POLY .1UF K 63V
CV13	232376	13040050	CAP LYTC 470UF M 16V
CV26	194673	10120960	CAP LYTC 1UF M 50V
CV29	194253	15002560	CAP LYTC 22UF M 16V TVR1
CV29	189981	15002130	CAP LYTC 10UF M 16V TVR2
CV514	206196	15005390	CAPCC .022UF Z Y5V 25V
CV515	206196	15005390	CAPCC .022UF Z Y5V 25V
CV517	232419	15005840	CAPCC 56PF J SL 50V
CV518	232419	15005840	CAPCC 56PF J SL 50V
CV519	232419	15005840	CAPCC 56PF J SL 50V
CV520	230968	15005750	CAPCC 470PF K Y5P 50V
CV521	206196	15005390	CAPCC .022UF Z Y5V 25V
CV522	206196	15005390	CAPCC .022UF Z Y5V 25V
CV523	206196	15005390	CAPCC .022UF Z Y5V 25V
CV524	232345	15005760	CAPCC 47PF J SL 50V
CV525	232345	15005760	CAPCC 47PF J SL 50V
CV527	232420	15005640	CAPCC 3300PF M Y5R 16V
CV528	232421	15005380	CAPCC 220PF K Y5P 50V
CX03	194673	10120960	CAP LYTC 1UF M 50V
CX04	200141	20467040	CAP POLY .1UF K 63V
CX06	200141	20467040	CAP POLY .1UF K 63V
CX08	200141	20467040	CAP POLY .1UF K 63V
CX09	200141	20467040	CAP POLY .1UF K 63V
CX10	200141	20467040	CAP POLY .1UF K 63V
CX505	232422	15005620	CAPCC 390PF K Y5P 50V
CX507	230965	15005470	CAPCC 2200PF M Y5R 16V
CX510	206198	15004860	CAPCC 100PF K Y5P 50V (SEE NOTE @)
CX510	232421	15005380	CAPCC 220PF K Y5P 50V (SEE NOTE @)
CX511	232345	15005760	CAPCC 47PF J SL 50V
CX512	232345	15005760	CAPCC 47PF J SL 50V
CZ01	220631	14001600	* CAPCD 1UF K Y5R 63V
DF01	198597	16008160	DIODE
DF02	164717	70436540	DIODE
DF21	164717	70436540	DIODE
DF22	164717	70436540	DIODE
DL01	164717	70436540	DIODE
DL02	231028	20403770	DIODE

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
DL04	231028	20403770	DIODE
DL05	231028	20403770	DIODE
DL06	231028	20403770	DIODE
DL07	198597	16008160	DIODE
DL08	198597	16008160	DIODE
DL11	164717	70436540	DIODE
DL12	227961	60447770	DIODE ZENER 3.9V .5W
DL13	227920	70438220	DIODE ZENER 9.1V .5W
DL14	164717	70436540	DIODE
DL20	164717	70436540	DIODE
DL21	164717	70436540	DIODE
DL23	164717	70436540	DIODE
DP01	209919	60447780	* DIODE (TVR1)
DP01	235471	16008460	* DIODE (TVR2)
DP02	209919	60447780	* DIODE (TVR1)
DP02	235471	16008460	* DIODE (TVR2)
DP03	209919	60447780	* DIODE (TVR1)
DP03	235471	16008460	* DIODE (TVR2)
DP04	209919	60447780	* DIODE (TVR1)
DP04	235471	16008460	* DIODE (TVR2)
DP05	231028	20403770	DIODE
DP06	231028	20403770	DIODE
DP07	231028	20403770	DIODE
DP10	232424	16008140	DIODE
DP11	230758	16020210	DIODE ZENER 2.7V 1.3W
DP12	209919	60447780	DIODE
DP13	209919	60447780	DIODE
DP20	232423	20344170	DIODE
DP21	231028	20403770	DIODE
DP30	231028	20403770	DIODE
DP31	232424	16008140	DIODE
DP32	164717	70436540	DIODE
DP33	164717	70436540	DIODE
DP34	220638	50890650	DIODE ZENER 6.8V .5W
DP40	230757	16007470	DIODE
DP41	164717	70436540	DIODE
DP42	198602	80444140	DIODE ZENER 5.1V .5W
DP43	224904	16008950	DIODE
DP44	224904	16008950	DIODE
DP45	224903	16008280	DIODE
DP46	220638	50890650	DIODE ZENER 6.8V .5W
DP82	164717	70436540	DIODE
DV01	164717	70436540	* DIODE
DV02	164717	70436540	DIODE
DV03	164717	70436540	DIODE
DV04	198602	80444140	DIODE ZENER 5.1V .5W
DV05	227920	70438220	DIODE ZENER 9.1V .5W
DV06	164717	70436540	DIODE
DZ01	164717	70436540	* DIODE
DZ02	159429	30946700	* DIODE ZENER 10V .4W
FP01	198605	50366200	* FUSE 2.5A 250V
IA01	232542	20319530	IC AUDIO OUTPUT
IF01	232538	10044490	IC VERT OUTPUT
IP01	230759	11006859	IC REGULATOR
IP02	232425	20362040	* IC OPTO-ISOLATOR (TLP521)(SEE NOTE @)
IP02	185215	20573910	* IC OPTO-ISOLATOR (TLP621)(SEE NOTE @)
IV01	232426	20398420	IC VIDEO/CHROMA
IX01	220114	20027298	IC CLOSED CAPTION
JL502	231024	10113550	RES CCF 1/10W 5% OR
JL503	231024	10113550	RES CCF 1/10W 5% OR
JL505	231024	10113550	RES CCF 1/10W 5% OR
JL506	231024	10113550	RES CCF 1/10W 5% OR
JL513	231024	10113550	RES CCF 1/10W 5% OR
JP501	231024	10113550	RES CCF 1/10W 5% OR
JP527	231024	10113550	RES CCF 1/10W 5% OR
JP532	231024	10113550	RES CCF 1/10W 5% OR
JP535	231024	10113550	RES CCF 1/10W 5% OR
JP537	231024	10113550	RES CCF 1/10W 5% OR
JP538	231024	10113550	RES CCF 1/10W 5% OR

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
JV506	231024	10113550	RES CCF 1/10W 5% OR
JV507	231024	10113550	RES CCF 1/10W 5% OR
JV515	231024	10113550	RES CCF 1/10W 5% OR
JX10	198707	15006730	RES CF 1/4W 5% 1K
JX506	231024	10113550	RES CCF 1/10W 5% OR
JX507	231024	10113550	RES CCF 1/10W 5% OR
LL01	230988	11007690	* TRANSFORMER DRIVER
LL02	232427	47035600	* BEAD
LL03	232324	2049994A	* COIL 90UH (TVR1)
LL03	235468	20532020	* COIL 60UH (TVR2)
LL04	232428	10147490	COIL 50UH TVR1,TVR2 (SEE NOTE@)
LL04	235513	20531970	COIL 100UH TVR2(SEE NOTE@)
LL05	232429	20341750	* TRANSFORMER IHVT TVR1
LL05	235472	20370040	* TRANSFORMER IHVT TVR2
LL07	232325	20340890	COIL 100UH (SEE NOTE@)
LL07	232324	2049994A	COIL 90UH (SEE NOTE@)
LP02	232430	47283900	* TRANSFORMER MAIN FILTER (SEE NOTE @)
LP02	232783	20421300	* TRANSFORMER MAIN FILTER (SEE NOTE @)
LP03	232431	2037793A	* TRANSFORMER SMT
LP04	232432	47243000	CHOKES
LP06	230991	20326450	COIL 4UH
LP07	230991	20326450	COIL 4UH
LP09	232433	20539740	BEAD
LP10	232434	20408050	* TRANSFORMER SMT
LP11	219305	13092020	COIL 6.8UH
LP12	219306	13053010	COIL 22UH
LP13	232432	47243000	CHOKES
LP14	210544	20459673	BEAD
LP15	210544	20459673	BEAD
LP16	224167	47033300	BEAD
LP17	224167	47033300	BEAD
LP18	210544	20459673	BEAD
LP19	210544	20459673	BEAD
LX01	232433	20539740	BEAD
PP01	232435	20455820	RES CONTROL 110V ADJ
PP02	232436	20189960	RES CONTROL 9.5V ADJ
QC02	232438	10254150	FILTER QUARTZ 3.579545MHZ
QV01	232441	48023700	RESONATOR 503KHZ
RA02	232442	13060710	* RES CFFP .3W 5% 3.3R
RA04	210183	15009540	RES CF 1/4W 5% 9.1K (SEE NOTE @)
RA04	198720	15008720	RES CF 1/4W 5% 56K (SEE NOTE @)
RA06	198644	15007580	RES CF 1/4W 5% 2.7K
RA07	829310	15006130	RES CF 1/4W 5% 10K
RA10	220663	15007290	RES CF 1/4W 5% 22K
RA11	232443	15009340	RES CF 1/4W 5% 82K
RA501	232444	15032440	RES CCF 1/10W 5% 220K
RA505	232445	15032140	RES CCF 1/10W 5% 150R
RA509	206354	15032250	RES CCF 1/10W 5% 1K
RC02	198722	15008490	RES CF 1/4W 5% 4.7K
RC08	220668	15008970	RES CF 1/4W 5% 680R
RC506	232446	15033160	RES CCF 1/10W 5% 680K
RC507	232447	15033040	RES CCF 1/10W 5% 560K
RC520	232448	15032230	RES CCF 1/10W 5% 18K
RE01	176646	15006630	RES CF 1/4W 5% 180R (SEE NOTE @)
RE01	220648	15007430	RES CF 1/4W 5% 270R (SEE NOTE @)
RE02	176646	15006630	RES CF 1/4W 5% 180R (SEE NOTE @)
RE02	220648	15007430	RES CF 1/4W 5% 270R (SEE NOTE @)



## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
RF01	220618	15009870	* RES CFFP .3W 5% 2.2R
RF02	175769	13005470	RES CF 1/2W 5% 390R TVR1
RF02	179798	13007160	RES CF .43W 5% 820R TVR2
RF04	179786	13001570	RES MF 2W 5% 22R
RF05	200416	13004290	RES CF 1/2W 5% 1.2R (SEE NOTE @)
RF05	232788	13081230	RES MF 1W 5% 1.2R (SEE NOTE @)
RF22	198690	15009300	RES CF 1/4W 5% 820R TVR1
RF22	210198	15006780	RES CF 1/4W 5% 1.2K TVR2
RF506	232455	15037060	RES CMF 1/10W 1% 2.74K
RF507	232456	15034800	RES CMF 1/10W 1% 100R
RF508	232457	15035950	RES CMF 1/10W 1% 1K TVR1
RF508	235479	15035970	RES CMF 1/10W 1% 1.05K TVR2
RF509	231013	15032270	RES CCF 1/10W 5% 1.2K
RF511	232458	15031990	RES CCF 1/10W 5% 10K (SEE NOTE @)
RF511	232789	15034870	RES CMF 1/10W 1% 10K (SEE NOTE @)
RF512	206365	15032320	RES CCF 1/10W 5% 1M
RF513	232446	15033160	RES CCF 1/10W 5% 680K
RF515	232459	15032880	RES CCF 1/10W 5% 430K TVR1
RF515	235478	15032640	RES CCF 1/10W 5% 300K TVR2
RF516	206354	15032250	RES CCF 1/10W 5% 1K
RF517	232455	15037060	RES CMF 1/10W 1% 2.74K (SEE NOTE @)
RF517	232790	15036930	RES CMF 1/10W 1% 2K (SEE NOTE @)
RF521	231000	15032590	RES CCF 1/10W 5% 2.7K
RL01	190556	13083620	RES MF 1W 5% 390R TVR1
RL01	235480	13001590	RES MF 1W 5% 270R TVR2
RL06	232460	13060250	RES CF .7W 5% 4.7K (SEE NOTE @)
RL06	220655	20488660	RES MF 2W 5% 680R (SEE NOTE @)
RL07	231023	20322320	* RES CFF 1/2W 5% 1K
RL08	232461	20470460	* RES MF 3W 5% 33R
RL10	220656	13004550	RES CF .43W 5% 220R
RL11	231018	10226280	* RES CFF 1/2W 5% 15R
RL12	232787	13000550	RES CFF 1/2W 5% .39R TVR1 (SEE NOTE @)
RL12	230937	20322330	RES CFF 1/2W 5% .56R TVR2 (SEE NOTE @)
RL12	232462	15009740	RES CFF 1/2W 5% 1R TVR1, TVR2 (SEE NOTE @)
RL13	232467	13000470	* RES CFF 1/2W 5% 2.2R TVR1 (SEE NOTE @)
RL13	231015	13055100	* RES CFF 1/2W 5% .22R TVR1 (SEE NOTE @)
RL13	235481	13088180	* RES CFF 1/2W 5% 2.7R TVR2 (SEE NOTE @)
RL13	235514	10160020	* RES CFF 1/2W 5% .68R TVR2 (SEE NOTE @)
RL15	232471	13004060	RES CF .43W 5% 1.8K
RL20	232474	15006510	RES CF 1/4W 5% 15K
RL22	232476	20419230	RES MF 1W 5% 91K TVR1
RL22	831382	13001900	RES MFFP 1W 5% 82K TVR2
RL502	232479	15033170	RES CCF 1/10W 5% 680R (SEE NOTE @)
RL502	230998	15032930	RES CCF 1/10W 5% 470R (SEE NOTE @)
RL503	231002	15032570	RES CCF 1/10W 5% 2.2K
RL504	206363	15032970	RES CCF 1/10W 5% 4.7K
RL521	231017	15032070	RES CCF 1/10W 5% 12K
RL523	232483	15033280	RES CCF 1/10W 5% 7.5K TVR1
RL523	206363	15032970	RES CCF 1/10W 5% 4.7K TVR2 (SEE NOTE @)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
RL523	231017	15032070	RES CCF 1/10W 5% 12K TVR2 (SEE NOTE @)
RP01	220653	20110870	* RES WW 5W 10% 2.7R TVR1
RP01	235482	20046810	* RES WW 5W 5% 2R TVR2
RP02	198688	90343700	* RES POSISTOR (TVR1)
RP02	207768	30948690	* THERMISTOR (TVR2)
RP03	232488	80439070	RES WW 7W 10% 1K
RP04	220333	15041120	* RES CC 1/2W 10% 1.8M
RP05	183193	13060860	RES MF 2W 5% 12K
RP06	232495	13002980	RES CF .43W 5% 100R
RP10	232496	20455800	RES WW 3W 5% 18R
RP12	232497	80438270	* RES MF 3W 5% 18K
RP14	829427	15007400	RES CF 1/4W 5% 270K
RP15	829427	15007400	RES CF 1/4W 5% 270K
RP20	232500	20396630	RES MF 3W 5% .15R
RP21	181986	15041100	* RES CC 1/2W 5% 3.3M
RP31	231015	13055100	* RES CFF 1/2W 5% .22R
RP40	175771	13002940	RES CF .43W 5% 100K
RP42	232501	13006420	RES CF .43W 5% 56K
RP45	220647	15006600	RES CF 1/4W 5% 180K
RP46	177596	13066290	RES MF 2W 10% 100R
RP47	232502	13001520	RES MF 2W 5% 220R
RP49	232503	80438190	* RES MF 3W 5% 2.7R
RP60	144098	15022760	RES MF 1W 10% 1K RES MF 3W 5% 330R (USE RP61 BELOW)
RP61	830215	13004000	RES CF 1/2W 5% 1.5K
RP62	232504	13004760	RES CF .43W 5% 270R
RP65	232505	13000170	* RES CFF 1/2W 5% 18R
RP507	232509	15036850	RES CMF 1/10W 1% 28K TVR1 (SEE NOTE @)
RP507	232791	15038340	RES CMF 1/10W 1% 54.9K TVR1 (SEE NOTE @)
RP507	235483	15038380	RES CMF 1/10W 1% 56.2K TVR2
RP508	232510	15036000	RES CMF 1/10W 1% 1.13K (SEE NOTE @)
RP508	232792	15036980	RES CMF 1/10W 1% 2.26K (SEE NOTE @)
RP509	206362	15031970	RES CCF 1/10W 5% 100K
RP513	232511	15036770	RES CMF 1/10W 1% 274K
RP516	232512	15032710	RES CCF 1/10W 5% 33R
RP518	232513	15032950	RES CCF 1/10W 5% 47R
RP519	206354	15032250	RES CCF 1/10W 5% 1K
RP526	232514	15034970	RES CMF 1/10W 1% 113K
RP527	232515	15032920	RES CCF 1/10W 5% 470K
RP528	232515	15032920	RES CCF 1/10W 5% 470K
RP541	231004	15033210	RES CCF 1/10W 5% 6.8K
RP543	210731	15032810	RES CCF 1/10W 5% 3.3K
RP548	206363	15032970	RES CCF 1/10W 5% 4.7K
RP550	206354	15032250	RES CCF 1/10W 5% 1K (SEE NOTE @)
RP550	232793	15032310	RES CMF 1/10W 5% 1.8K (SEE NOTE @)
RP551	232794	15033010	RES CMF 1/10W 5% 510R (SEE NOTE @)
RP551	231516	15032770	RES CCF 1/10W 5% 390R (SEE NOTE @)
RP552	232517	15032530	RES CCF 1/10W 5% 270R
RP553	232450	15032460	RES CCF 1/10W 5% 22K
RP554	231004	15033210	RES CCF 1/10W 5% 6.8K
RP555	206354	15032250	RES CCF 1/10W 5% 1K
RP556	206364	15031980	RES CCF 1/10W 5% 100R
RP557	232458	15031990	RES CCF 1/10W 5% 10K
RP558	210731	15032810	RES CCF 1/10W 5% 3.3K
RP563	206354	15032250	RES CCF 1/10W 5% 1K
RP564	232525	15033050	RES CCF 1/10W 5% 560R
RP580	231004	15033210	RES CCF 1/10W 5% 6.8K
RP581	232526	15032700	RES CCF 1/10W 5% 33K
RP582	232524	15032940	RES CCF 1/10W 5% 47K
RV01	232467	13000470	* RES CFF 1/2W 5% 2.2R
RV02	232527	15009950	* RES CFF .3W 5% 39R
RV08	198699	15006660	RES CF 1/4W 5% 18K TVR1
RV08	220658	15009000	RES CF 1/4W 5% 68K TVR2
RV16	232521	15007260	RES CF 1/4W 5% 220R
RV17	232521	15007260	RES CF 1/4W 5% 220R

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
RV18	232521	15007260	RES CF 1/4W 5% 220R
RV25	198719	15007830	RES CF 1/4W 5% 33K
		TVR1	
RV25	235484	13060360	RES CF 1/4W 5% 24K
		TVR2	
RV39	198707	15006730	RES CF 1/4W 5% 1K
RV41	230997	15009970 *	RES CFF .3W 5% 3.9R
RV44	198646	15007540	RES CF 1/4W 5% 2.2K
		(SEE NOTE @)	
RV44	198672	15006830	RES CF 1/4W 5% 1.5K
		(SEE NOTE @)	
RV45	829310	15006130	RES CF 1/4W 5% 10K
RV46	198717	15008360	RES CF 1/4W 5% 470R
RV47	177596	13066290	RES MF 2W 10% 100R
RV501	206363	15032970	RES CCF 1/10W 5% 4.7K
RV509	232444	15032440	RES CCF 1/10W 5% 220K
RV514	232522	15033270	RES CCF 1/10W 5% 75R
RV515	206354	15032250	RES CCF 1/10W 5% 1K
RV520	230998	15032930	RES CCF 1/10W 5% 470R
RV521	231000	15032590	RES CCF 1/10W 5% 2.7K
RV523	231017	15032070	RES CCF 1/10W 5% 12K
		TVR1	
RV523	235485	15032150	RES CCF 1/10W 5% 15K
		TVR2	
RV526	206364	15031980	RES CCF 1/10W 5% 100R
RV527	206354	15032250	RES CCF 1/10W 5% 1K
RV528	232448	15032230	RES CCF 1/10W 5% 18K
RV529	232450	15032460	RES CCF 1/10W 5% 22K
RV533	232523	15032520	RES CCF 1/10W 5% 270K
RV534	206354	15032250	RES CCF 1/10W 5% 1K
RV535	232524	15032940	RES CCF 1/10W 5% 47K
RV536	231013	15032270	RES CCF 1/10W 5% 1.2K
RV537	206354	15032250	RES CCF 1/10W 5% 1K
RV538	231013	15032270	RES CCF 1/10W 5% 1.2K
		(SEE NOTE @)	
RV538	232795	15033310	RES CMF 1/10W 5% 820R
		(SEE NOTE @)	
RV540	206363	15032970	RES CCF 1/10W 5% 4.7K
RV543	232458	15031990	RES CCF 1/10W 5% 10K
RV546	210731	15032810	RES CCF 1/10W 5% 3.3K
RX10	198707	15006730	RES CF 1/4W 5% 1K
		(SEE NOTE @)	
RX10	232521	15007260	RES CF 1/4W 5% 220R
		(SEE NOTE @)	
RX14	232528	15007460	RES CF 1/4W 5% 27K
RX502	206362	15031970	RES CCF 1/10W 5% 100K
RX503	232458	15031990	RES CCF 1/10W 5% 10K
RX506	230998	15032930	RES CCF 1/10W 5% 470R
RX507	231004	15033210	RES CCF 1/10W 5% 6.8K
RX508	232529	15032450	RES CCF 1/10W 5% 220R
RX509	232529	15032450	RES CCF 1/10W 5% 220R
RX511	206363	15032970	RES CCF 1/10W 5% 4.7K
		TVR1	
RX511	235486	15032830	RES CCF 1/10W 5% 3.9K
		TVR2	
RX512	206363	15032970	RES CCF 1/10W 5% 4.7K
		TVR1	
RX512	235486	15032830	RES CCF 1/10W 5% 3.9K
		TVR2	
RX513	206363	15032970	RES CCF 1/10W 5% 4.7K
		TVR1	
RX513	235486	15032830	RES CCF 1/10W 5% 3.9K
		TVR2	
RX515	232516	15032770	RES CCF 1/10W 5% 390R
RX516	232516	15032770	RES CCF 1/10W 5% 390R
RX517	232516	15032770	RES CCF 1/10W 5% 390R
RZ02	198646	15007540 *	RES CF 1/4W 5% 2.2K
RZ04	160155	15010340 *	RES MF .4W 1% 10K
RZ501	206364	15031980	RES CCF 1/10W 5% 100R
		(SEE NOTE@)	
RZ501	232522	15033270	RES CCF 1/10W 5% 75R
		(SEE NOTE@)	
RZ503	232530	15039100	RES CMF 1/10W 1% 7.15K
		TVR1	
RZ503	235487	15039120	RES CMF 1/10W 1% 7.5K
		TVR2	
RZ505	232458	15031990	RES CCF 1/10W 5% 10K
SP05	190490	90578040	RELAY

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
TA01	198747	16001120	TRANSISTOR VOL CONTROL
TA02	198746	16000940	TRANSISTOR MUTE
TF21	198743	16000930	TRANSISTOR BUFFER
TL01	230763	16000560	TRANSISTOR DRIVER
TL02	230760	16005230 *	TRANSISTOR HORIZ OUT
TL02	235504	20578760 *	TRANSISTOR HORIZ OUT
TL13	230763	16000560	TRANSISTOR REGULATOR
TP01	230761	16004600	TRANSISTOR CHOPPER
TP02	220674	16000920	TRANSISTOR FEEDBACK AMP
TP05	225523	16004590	TRANSISTOR OUTPUT
TP06	230763	16000560	TRANSISTOR REG OUTPUT
TP07	198743	16000930	TRANSISTOR FEEDBACK AMP
TP08	198743	16000930	TRANSISTOR FEEDBACK AMP
TP09	230764	16001110	TRANSISTOR FEEDBACK AMP
TP10	230764	16001110	TRANSISTOR REG AMP
TP82	230764	16001110	TRANSISTOR SWITCH
TV01	215997	16000450	TRANSISTOR REGULATOR
TV02	198743	16000930	TRANSISTOR SWITCH
TV03	230764	16001110	TRANSISTOR VIDEO AMP
TV04	215997	16000450	TRANSISTOR REGULATOR
W001	233556	20367330	CABLE ASY 9 PIN
W001	235494	20499280	CABLE ASY 9 PIN
		TVR2	
KINE DRIVER CBA			
	232551	20362390	● CIRCUIT COMPLETE
		TVR1	
	235488	20417680	● CIRCUIT COMPLETE
		TVR2	
BT01	224146	20174620 *	SOCKET PIX TUBE
BT02	230935	20174650 *	SOCKET, PIX TUBE
CT81	189981	15002130	CAP LYTC 10UF M 16V
CT82	232543	13047550	CAP LYTC 2.2UF M 250V
CT83	189981	15002130	CAP LYTC 10UF M 16V
CT84	232544	14033040	CAPCD .01UF M Y5U 400V
CT85	183147	14036020 *	CAPCD 2200PF FS Y5U 2KV
CT550	230969	15005190	CAPCC 1000PF K Y5P 50V
CT552	206198	15004860	CAPCC 100PF K Y5P 50V
		TVR1	
CT552	230956	15004960	CAPCC 120PF K Y5P 50V
		TVR2	
CT560	230969	15005190	CAPCC 1000PF K Y5P 50V
CT562	206198	15004860	CAPCC 100PF K Y5P 50V
		TVR1	
CT562	230956	15004960	CAPCC 120PF K Y5P 50V
		TVR2	
CT570	230969	15005190	CAPCC 1000PF K Y5P 50V
CT572	206198	15004860	CAPCC 100PF K Y5P 50V
		TVR1	
CT572	230956	15004960	CAPCC 120PF K Y5P 50V
		TVR2	
CT583	232345	15005760	CAPCC 47PF J SL 50V
DT50	164717	70436540	DIODE
DT51	164717	70436540	DIODE
DT53	230757	16007470	DIODE
DT54	198646	15007540	RES CF 1/4W 5% 2.2K
DT60	164717	70436540	DIODE
DT61	164717	70436540	DIODE
DT63	230757	16007470	DIODE
DT64	198646	15007540	RES CF 1/4W 5% 2.2K
DT70	164717	70436540	DIODE
DT71	164717	70436540	DIODE
DT73	230757	16007470	DIODE
DT74	198646	15007540	RES CF 1/4W 5% 2.2K
DT83	164717	70436540	DIODE
DT85	232545	11073660	DIODE ZENER 8.2V .5W
HT01	233555	2036502A	CABLE ASY 10 PIN
		TVR2	

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
HT01	235495	2042566A	CONNECTOR 10 PIN TVR2	1	MK2034	2056851B	* MASK, CABINET FRONT T13065
JT501	231024	10113550	RES CCF 1/10W 5% 0R	1	MK2039	2056857B	* MASK, CABINET FRONT T13070
JT502	231024	10113550	RES CCF 1/10W 5% 0R	1	MK2036	2056603A	* MASK, CABINET FRONT T19060
JT503	231024	10113550	RES CCF 1/10W 5% 0R	2	BK1956	2041373A	* BACK, COVER 13TVR60, T13060
JT504	231024	10113550	RES CCF 1/10W 5% 0R	2	BK1960	2055253B	* BACK, COVER 13TVR70, T13070
RT51	198707	15006730	RES CF 1/4W 5% 1K	2	BK2035	20413730	* BACK, COVER T13065
RT52	179956	13001540	RES MF 2W 5% 22K	2	BK2031	20421430	* BACK, COVER 19TVR60, T19060
RT54	195726	13003940	RES CF .43W 5% 1.2K	3	232533	20389990	BRACKET, CHASSIS
RT57	232546	13082180	RES MF 1W 5% 56K TVR1	5	232314	2041501A	BUTTON CLUSTER 13TVR60, 19TVR60
RT57	179784	10133770	RES MF 1W 5% 68K TVR2	5	232775	2055255A	BUTTON CLUSTER 13TVR70
RT61	198707	15006730	RES CF 1/4W 5% 1K	5	232561	20552080	BUTTON CLUSTER (7 BUTTON) T13060, T19060
RT62	179956	13001540	RES MF 2W 5% 22K	5	235499	2056850B	BUTTON, CLUSTER (7 BUTTON) T13065
RT64	195726	13003940	RES CF .43W 5% 1.2K	5	235515	2056855B	BUTTON, CLUSTER (7 BUTTON) T13070
RT67	232546	13082180	RES MF 1W 5% 56K TVR1	5	232563	20552040	BUTTON CLUSTER (VOL/PROG) T13060, T19060
RT67	179784	10133770	RES MF 1W 5% 68K TVR2	5	235500	2056849A	BUTTON, CLUSTER (VOL/PROG) T13065
RT71	198707	15006730	RES CF 1/4W 5% 1K	5	235516	2056853A	BUTTON, CLUSTER (VOL/PROG) T13070
RT72	179956	13001540	RES MF 2W 5% 22K	6	223313	2041351A	DOOR, AUX CONTROL 13TVR60
RT74	195726	13003940	RES CF .43W 5% 1.2K	6	232773	2055221A	DOOR, AUXILIARY 13TVR70, T13070
RT77	232546	13082180	RES MF 1W 5% 56K TVR1	6	235463	2041351B	DOOR, AUX CONTROL 19TVR60
RT77	179784	10133770	RES MF 1W 5% 68K TVR2	6	232560	20552300	DOOR, AUX CONTROL T13060
RT90	198811	15006200	RES CF .7W 5% 10R	6	235498	20571510	DOOR, AUXILIARY T13065
RT92	232548	40434960	* RES CC 1/2W 5% 10K	6	235511	20575440	DOOR, AUXILIARY T19060
RT94	232521	15007260	RES CF 1/4W 5% 220R	7	232776	20390040	WINDOW, IR 13TVR60, 13TVR70, 19TVR60
RT553	231013	15032270	RES CCF 1/10W 5% 1.2K	7	232922	20426290	WINDOW, IR T13060, T13065, T13070, T19060
RT555	206354	15032250	RES CCF 1/10W 5% 1K	8	A34JFQ90X	20262780	* PICTURE TUBE 13TVR60, 13TVR70, T13060, T13065, T13070
RT558	231013	15032270	RES CCF 1/10W 5% 1.2K TVR1	8	5UEB22TC55	20414230	* PICTURE TUBE ASY 19TVR60, T19060
RT558	206354	15032250	RES CCF 1/10W 5% 1K TVR2	10	232778	2044620A	GUIDE, SWIVEL 13TVR70, T13070 (USES BEARING, SWIVEL LISTED BELOW)
RT563	231013	15032270	RES CCF 1/10W 5% 1.2K	11	232777	2044617A	BASE, SWIVEL 13TVR70, T13070
RT565	206354	15032250	RES CCF 1/10W 5% 1K	13	233183	20390050	LIGHT GUIDE, LED 13TVR60, 13TVR70
RT568	231013	15032270	RES CCF 1/10W 5% 1.2K TVR1	13	233184	20426270	LIGHT GUIDE, LED 19TVR60, T13060, T13065, T13070, T19060
RT568	206354	15032250	RES CCF 1/10W 5% 1K TVR2	14	149552	1054050A	* SCREW, 5.7MMDx28.5MM KINE MTG (4) 13TVR60, 13TVR70, T13060, T13065, T13070
RT573	231013	15032270	RES CCF 1/10W 5% 1.2K	14	235464	67487000	SCREW, 7MMDx38MM KINE MTG (4) 19TVR60, T19060
RT575	206354	15032250	RES CCF 1/10W 5% 1K	15	221586	30909799	SCREW, 4.8MMDx16MM LG CABINET (6)
RT578	231013	15032270	RES CCF 1/10W 5% 1.2K TVR1	16	232316	20411860	SPEAKER, 4W 16 OHM 13TVR60, 13TVR70, T13060
RT578	206354	15032250	RES CCF 1/10W 5% 1K TVR2	16	235502	20088510	SPEAKER, 3W 16 OHM T13065, T13070
RT583	231000	15032590	RES CCF 1/10W 5% 2.7K				
RT585	206354	15032250	RES CCF 1/10W 5% 1K				
TT50	232549	16003090	TRANSISTOR DRIVER				
TT51	198751	16003110	TRANSISTOR OUTPUT				
TT52	185197	16003760	TRANSISTOR DRIVER				
TT60	232549	16003090	TRANSISTOR DRIVER				
TT61	198751	16003110	TRANSISTOR OUTPUT				
TT62	185197	16003760	TRANSISTOR DRIVER				
TT70	232549	16003090	TRANSISTOR DRIVER				
TT71	198751	16003110	TRANSISTOR OUTPUT				
TT72	185197	16003760	TRANSISTOR DRIVER				
TT81	232550	16001060	TRANSISTOR SWITCH				
MECHANICAL ASSEMBLY-TV							
1	MK1955	2041345B	* MASK, CABINET FRONT 13TVR60				
1	MK1959	2055220A	* MASK, CABINET FRONT 13TVR70				
1	MK2030	20421470	* MASK, CABINET FRONT 19TVR60				
1	MK1957	20552090	* MASK, CABINET FRONT T13060				

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
16	235465	20419420	SPEAKER, 3.5W 16 OHM 19TVR60, T19060
	232779	20455010	BEARING, SWIVEL 13TVR70, T13070
	232537	10010410	CLIP, 1A01/IF01
	210537	57040900	CLIP, TP01
	232539	10762100	CLIP, TL02
	198807	2012194A *	COIL, DEGAUSSING (SEE NOTE @) 13TVR60, 13TVR70, T13060
	232781	20590120 *	COIL, DEGAUSSING (SEE NOTE @) 13TVR60, 13TVR70, T13060, T13065, T13070
	230744	20449410 *	COIL, DEGAUSSING 19TVR60, T19060
	210552	30930810	CONNECTOR 2 PIN
	232315	10153080	CONNECTOR, HORIZ YOKE
	198778	67193911	CONNECTOR, VERT YOKE
	232541	20167180	CUSHION, YOKE ADJ WEDGE 19TVR60, T19060
	149903	30728800	CUSHION, YOKE ADJ WEDGE 13TVR60, 13TVR70, T13060, T13065, T13070
	232780	20456120	FOOT, RUBBER (SWIVEL) 13TVR70, T13070
	233557	20366110	HEATSINK, 1A01/IF01
	233558	20366090	HEATSINK, TL02
	233559	20366120	HEATSINK, TP02
	232921	20554660	HOOK, REMOTE MTG 13TVR70, T13070
	232327	20166490	MAGNET, BEAM BENDER
	175364	41012502 *	RESISTOR .43W 5% 680R (ON YOKE)
	164699	90542011	RETAINER, WIRE TIE
	219178	20060090	SCREW, 3MMDx10MM
	235466	64059857	SCREW, 3MMDx12MM
	224168	11005556	SCREW, 3.5MMDx9.5M LGT GUIDE(1)/SPKR(2)
	209729	50109000	SCREW, 4MMDx12MM IHVT
	164100	90313300	SPRING, DEGAUSS MTG
	213201	30898500	SPRING, DOOR 13TVR60, T13060
	232774	20589050	SPRING, DOOR 13TVR70
	139301	67492300	WIRE TIE, DEGAUSS MTG
	232326	20166560 *	YOKE

## VCR SECTION

## TVR2A/TVR2B VCR DECK ELECTRICAL ASSEMBLIES

CIRCUIT CHAN/VOL KEYBD  
T13060GY, T13065,  
T13070, T190R60  
(SEE #0213)  
CIRCUIT KEYBD/DISPLAY  
T13060GY, T13065,  
T13070, T190R60  
(SEE #0210M)  
CIRCUIT KEYBD/DISPLAY  
13TVR60, 13TVR70,  
19TVR60 (SEE #0210M)  
CIRCUIT MAIN VCR  
(SEE #0005M)  
CIRCUIT TUNER VCR  
(SEE #NZ001)

## ELECTRICAL COMPONENTS

BP01

CABLE, AC CORD (SEE  
MECHANICAL PARTS)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
BP001	232295	20487530	CONNECTOR AC CORD
BS030	224922	20212580	CONNECTOR 2 PIN VIDEO ERASE HEAD
BS031	224923	10120770	CONNECTOR 7 PIN AUDIO ERASE HEAD
BT001	232296	10347540	CONNECTOR 12 PIN KEYBOARD
BT005	224927	60431002	CONNECTOR 6 PIN LOADING MOTOR
BT006	224929	10120820	CONNECTOR 14 PIN CAPSTAN MTR
BV001	224930	10175950	CONNECTOR 10 PIN LOWER DRUM
BX001	232297	11097270	JACK A/V OUTPUT
BX020	224931	20215400	JACK A/V INPUT
BX100	232571	10242330	CABLE ASY 4 PIN
CN001	219199	20225890	CAPCC .001UF J N750 50V
CN002	219199	20225890	CAPCC .001UF J N750 50V
CN003	219199	20225890	CAPCC .001UF J N750 50V
CN008	195689	11059340	CAPCC .01UF K X7R 50V
CN009	219199	20225890	CAPCC .001UF J N750 50V
CN010	219199	20225890	CAPCC .001UF J N750 50V
CN011	215555	40432770	CAPCC .01UF K X7R 50V
CN012	215555	40432770	CAPCC .01UF K X7R 50V
CN013	195689	11059340	CAPCC .01UF K X7R 50V
CN014	215555	40432770	CAPCC .01UF K X7R 50V
CN015	195689	11059340	CAPCC .01UF K X7R 50V
CN016	219207	20227010	CAPCC 6800PF K X7R 50V
CN017	206215	11058940	CAPCC 100PF J N750 50V
CN022	206215	11058940	CAPCC 100PF J N750 50V
CN023	219208	20227710	CAPCC 100PF J NPO 50V
CS001	224935	60440410	CAPCC 1500PF J N750 50V
CS002	193587	15003210	CAP LYTC 4.7UF M 25V
CS003	224935	60440410	CAPCC 1500PF J N750 50V
CS004	193587	15003210	CAP LYTC 4.7UF M 25V
CS005	187270	10257720	CAP LYTC 22UF M 16V
CS006	207533	20266300	CAP POLY .01UF J 50V
CS007	193585	10167020	CAP LYTC 47UF M 16V
CS009	197057	20251250	CAPCC .047UF K X7R 50V
CS012	217298	15040860	CAPCC .22UF Z Y5V 25V
CS014	193585	10167020	CAP LYTC 47UF M 16V
CS016	210799	40432850	CAPCC .22UF Z Y5V 50V
CS018	210799	40432850	CAPCC .22UF Z Y5V 50V
CS020	225222	15001620	CAP POLY 6800PF J 63V
CS021	194557	13082060	CAP LYTC 10UF M 50V
CS022	187270	10257720	CAP LYTC 22UF M 16V
CS023	205237	40432910	CAP POLY .056UF J 63V
CS024	212417	20355480	CAP POLY 4700PF J 50V
CS025	194557	13082060	CAP LYTC 10UF M 50V
CS028	207542	20344150	CAP POLY .012UF J 50V
CS030	212434	20229450	CAPCC .01UF K X7R 50V
CS031	224936	20198930	CAPCC 5600PF Z Y5V 50V
CS033	205237	40432910	CAP POLY .056UF J 63V
CS034	226429	14033010	CAPCD 470PF K Y5P 400V
CS036	194673	10120960	CAP LYTC 1UF M 50V
CS038	193585	10167020	CAP LYTC 47UF M 16V
CT010	211536	20226980	CAPCC 2200PF K X7R 50V
CT011	232251	13071090	CAP LYTC 47UF M 16V
CT012	206246	15041170	CAPCC .1UF K X7R 25V
CT013	206246	15041170	CAPCC .1UF K X7R 25V
CT014	161997	40432840	CAPCC .1UF Z Y5V 50V
CT015	212396	20224990	RES CMF 1/10W 5% 33K
CT017	206246	15041170	CAPCC .1UF K X7R 25V
CT019	211536	20226980	CAPCC 2200PF K X7R 50V
CT020	206246	15041170	CAPCC .1UF K X7R 25V
CT021	161997	40432840	CAPCC .1UF Z Y5V 50V
CT022	226431	40432890	CAP POLY .47UF K 63V
CT023	152242	15002740	CAP LYTC 2.2UF M 50V
CT028	226432	20230630	CAPCC .015UF K X7R 50V
CT029	226432	20230630	CAPCC .015UF K X7R 50V
CT030	226432	20230630	CAPCC .015UF K X7R 50V
CT069	219221	15049350	CAPCC .47UF Z Y5V 16V
CT070	219215	20230650	CAPCC .1UF Z Y5V 25V
CT100	206246	15041170	CAPCC .1UF K X7R 25V
CT101	214732	30938740	CAPCC 470PF J NPO 50V

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
CT102	216021	20226560	CAPCC 470PF J NPO 50V	CV052	212434	20229450	CAPCC .01UF K X7R 50V
CT103	216021	20226560	CAPCC 470PF J NPO 50V	CV054	206246	15041170	CAPCC .1UF K X7R 25V
CT104	216022	20228910	CAPCC 10PF D NPO 50V	CV055	211528	20226210	CAPCC 4700PF K X7R 50V
CT105	216022	20228910	CAPCC 10PF D NPO 50V	CV056	212434	20229450	CAPCC .01UF K X7R 50V
CT108	232251	13071090	CAP LYTC 47UF M 16V	CV060	219238	20227160	CAPCC 150PF J NPO 50V
CT109	212433	20229430	CAPCC 560PF K X7R 50V	CV070	208429	13076760	CAP LYTC 47UF M 16V
CT110	232251	13071090	CAP LYTC 47UF M 16V	CV071	219215	20230650	CAPCC .1UF Z Y5V 25V
CT111	212433	20229430	CAPCC 560PF K X7R 50V	CV072	225485	20350750	CAPCC 560PF J NPO 50V
CT112	219238	20227160	CAPCC 150PF J NPO 50V	CV073	225488	20226990	CAPCC 3900PF K NPO 50V
CT113	206246	15041170	CAPCC .1UF K X7R 25V	CV074	152239	13091760	CAP LYTC 3.3UF M 50V
CT114	212291	20228330	CAPCC 22PF J NPO 50V	CV076	194271	10122870	CAP LYTC 1UF M 50V
CT115	206246	15041170	CAPCC .1UF K X7R 25V	CV138	219208	20227710	CAPCC 100PF J NPO 50V
CT116	232253	13074310	CAP LYTC 1UF M 50V	CV140	219206	20198410	CAPCC 2200PF K X7R 50V
CT117	232253	13074310	CAP LYTC 1UF M 50V				
CT118	225645	50876840	CAP LYTC .1UF Z 5.5V	CX001	216021	20226560	CAPCC 47PF J NPO 50V
CT119	212288	20231250	CAPCC 1000PF K X7R 50V	CX002	221521	14035530	CAPCC .022UF K Y5R 25V
CT120	212288	20231250	CAPCC 1000PF K X7R 50V	CX004	230979	15001920	CAP LYTC 100UF M 16V
CT121	232254	20355070	CAP LYTC 100UF M 25V	CX102	221521	14035530	CAPCC .022UF K Y5R 25V
CT123	211531	20228920	CAPCC 15PF J NPO 50V				
CT124	217298	15040860	CAPCC .22UF Z Y5V 25V	CZ016	161997	40432840	CAPCC .1UF Z Y5V 50V
CT127	221521	14035530	CAPCC .022UF K Y5R 25V	CZ024	161997	40432840	CAPCC .1UF Z Y5V 50V
CT128	195689	11059340	CAPCC .01UF K X7R 50V	CZ025	194557	13082060	CAP LYTC 10UF M 50V
CT131	208429	13051370	CAP LYTC 47UF M 16V	CZ047	226433	10140580	CAPCC .47UF Z Y5V 16V
CT139	211531	20228920	CAPCC 15PF J NPO 50V				
CT140	212434	20229450	CAPCC .01UF K X7R 50V	DT105	198597	16008160	DIODE
CT141	206246	15041170	CAPCC .1UF K X7R 25V	DT106	198597	16008160	DIODE
CT142	206246	15041170	CAPCC .1UF K X7R 25V	DT107	224938	80443510	DIODE ZENER 6.8V 1.3W
CT150	232234	20227190	CAPCC 270PF K NPO 50V	DT108	206077	16012450	DIODE
CT200	206246	15041170	CAPCC .1UF K X7R 25V	DT109	206077	16012450	DIODE
CT201	206246	15041170	CAPCC .1UF K X7R 25V	DT140	164717	70436540	DIODE
CT202	232251	13071090	CAP LYTC 47UF M 16V	DT200	198597	16008160	DIODE
CT203	193579	15002470	CAP LYTC 220UF M 10V	DT201	198597	16008160	DIODE
CT204	206246	15041170	CAPCC .1UF K X7R 25V	DT202	198597	16008160	DIODE
CT300	212434	20229450	CAPCC .01UF K X7R 50V	DT203	219241	16030280	DIODE ZENER 4.7V .5W
				DT204	219247	16012470	DIODE
				DT205	206077	16012450	DIODE
CV002	219231	20230140	CAPCC 180PF J NPO 50V				
CV003	219223	20227510	CAPCC 220PF J N750 50V	DX100	206077	16012450	DIODE
CV004	211511	20225850	CAPCC 68PF J N750 50V	DX101	206077	16012450	DIODE
CV005	226485	15070840	CAPCC 620PF G NPO 50V	DX102	206077	16012450	DIODE
CV007	211522	10140570	CAPCC 1UF Z Y5V 16V	DX103	206077	16012450	DIODE
CV008	212291	20228330	CAPCC 22PF J NPO 50V				
CV009	211545	20283210	CAPCC .01UF K X7R 50V	DZ005	219249	16030290	DIODE ZENER 5.1V .5W
CV010	225484	11070800	CAPCC 820PF J N470 50V	DZ006	219247	16012470	DIODE
CV011	225487	20350780	CAPCC 130PF J N750 50V	DZ025	224939	16030430	DIODE ZENER 9.1V .5W
CV012	219215	20230650	CAPCC .1UF Z Y5V 25V	DZ026	219247	16012470	DIODE
CV013	152239	13091760	CAP LYTC 3.3UF M 50V				
CV015	226432	20230630	CAPCC .015UF K X7R 50V	GT100	206184	10627200	DIODE REMOTE RCVR
CV016	226433	10140580	CAPCC .47UF Z Y5V 16V	GT101	225506	10137670	DIODE SUPPLY REEL SENSE
CV017	219199	20225890	CAPCC .001UF J N750 50V	GT102	225506	10137670	DIODE TAKE-UP REEL SENSE
CV018	220593	14008500	CAPCC .33UF Z Y5V 16V	GT103	207701	30744200	TRANSISTOR TAPE START SENSOR
CV019	219223	20227510	CAPCC 220PF J N750 50V	GT104	207701	30744200	TRANSISTOR TAPE END SENSOR
CV020	219215	20230650	CAPCC .1UF Z Y5V 25V	GT105	226434	10150570	TRANSISTOR OPTICAL SENSOR
CV021	219238	20227160	CAPCC 150PF J NPO 50V				
CV022	206246	15041170	CAPCC .1UF K X7R 25V				
CV023	225548	20229030	CAPCC 56PF J N150 50V				
CV024	190552	70427610	CAPCC .1UF K X7R 50V				
CV025	212434	20229450	CAPCC .01UF K X7R 50V				
CV026	220593	14008500	CAPCC .33UF Z Y5V 16V				
CV027	225545	15070880	CAPCC 750PF J NPO 50V				
CV028	212290	20350690	CAPCC 8PF C NPO 50V	IS001	224948	10122010	IC AUDIO HEAD SWITCH
CV029	207854	15002850	CAP LYTC .47UF M 50V				
CV030	226433	10140580	CAPCC .47UF Z Y5V 16V	IT001	233726	20569710	IC MICROPROCESSOR
CV031	211522	10140570	CAPCC 1UF Z Y5V 16V	IT002	224950	10149630	IC MOTOR DRIVER
CV032	152242	15002740	CAP LYTC 2.2UF M 50V	IT003	224951	10030300	IC EEPROM
CV033	193588	15002190	CAP LYTC 10UF M 16V	IT004	224952	20375060	IC SYSTEM RESET
CV034	152242	15002740	CAP LYTC 2.2UF M 50V				
CV035	193588	15002190	CAP LYTC 10UF M 16V	IV001	224953	20391730	IC Y/C PROCESSOR
CV036	219215	20230650	CAPCC .1UF Z Y5V 25V	IV040	224954	10119420	IC CCD DELAY
CV037	230979	15001920	CAP LYTC 100UF M 16V	IV070	224955	20374620	IC SYNC SEPARATOR
CV038	216078	15049370	CAPCC 1UF Z Y5V 16V				
CV039	182297	13039370	CAP LYTC 100UF M 6.3V	IX101	225493	10292210	IC INPUT SELECT
CV040	216061	20230480	CAPCC 27PF J N750 50V				
CV041	219215	20230650	CAPCC .1UF Z Y5V 25V	JS001	207711	20283120	RES CMF 1/8W 5% OR
CV042	219221	15049350	CAPCC .47UF Z Y5V 16V	JS003	207711	20283120	RES CMF 1/8W 5% OR
CV043	219200	20225180	CAPCC 18PF J NPO 50V	JS005	206077	16012450	DIODE
CV044	219215	20230650	CAPCC .1UF Z Y5V 25V	JS008	207711	20283120	RES CMF 1/8W 5% OR
CV045	174642	10143660	CAP LYTC 10UF M 6.3V	JS009	207711	20283120	RES CMF 1/8W 5% OR
CV046	212434	20229450	CAPCC .01UF K X7R 5V	JS016	207711	20283120	RES CMF 1/8W 5% OR
CV047	216078	15049370	CAPCC 1UF Z Y5V 16V	JS022	207711	20283120	RES CMF 1/8W 5% OR
CV049	211522	10140570	CAPCC 1UF Z Y5V 16V	JS023	200473	20283320	RES CMF 1/10W 5% OR
CV050	208429	13076760	CAP LYTC 47UF M 16V	JS026	207711	20283120	RES CMF 1/8W 5% OR
CV051	219200	20225180	CAPCC 18PF J NPO 50V	JS027	200473	20283320	RES CMF 1/10W 5% OR

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
JS042	207711	20283120	RES CMF 1/8W 5% OR
JS044	207711	20283120	RES CMF 1/8W 5% OR
JT001	175324	20469450	RES CF 1/4W 5% 220R
JT004	207711	20283120	RES CMF 1/8W 5% OR
JT006	207711	20283120	RES CMF 1/8W 5% OR
JT010	200473	20283320	RES CMF 1/10W 5% OR
JT018	200473	20283320	RES CMF 1/10W 5% OR
JT025	200473	20283320	RES CMF 1/10W 5% OR
JT026	200473	20283320	RES CMF 1/10W 5% OR
JT032	207711	20283120	RES CMF 1/8W 5% OR
JT037	207711	20283120	RES CMF 1/8W 5% OR
JT040	207711	20283120	RES CMF 1/8W 5% OR
JT041	207711	20283120	RES CMF 1/8W 5% OR
JT044	207711	20283120	RES CMF 1/8W 5% OR
JT071	207711	20283120	RES CMF 1/8W 5% OR
JT072	211615	20221160	RES CMF 1/8W 5% 68R
JT074	200473	20283320	RES CMF 1/10W 5% OR
JT077	207711	20283120	RES CMF 1/8W 5% OR
JT081	200473	20283320	RES CMF 1/10W 5% OR
JT102	207711	20283120	RES CMF 1/8W 5% OR
JT103	207711	20283120	RES CMF 1/8W 5% OR
JT104	207711	20283120	RES CMF 1/8W 5% OR
JT107	200473	20283320	RES CMF 1/10W 5% OR
JT108	207711	20283120	RES CMF 1/8W 5% OR
JT109	207711	20283120	RES CMF 1/8W 5% OR
JT110	207711	20283120	RES CMF 1/8W 5% OR
JT111	207711	20283120	RES CMF 1/8W 5% OR
JT112	207711	20283120	RES CMF 1/8W 5% OR
JT113	207711	20283120	RES CMF 1/8W 5% OR
JT114	207711	20283120	RES CMF 1/8W 5% OR
JT116	200473	20283320	RES CMF 1/10W 5% OR
JT117	207711	20283120	RES CMF 1/8W 5% OR
JT118	200473	20283320	RES CMF 1/10W 5% OR
JT120	200473	20283320	RES CMF 1/10W 5% OR
JT125	207711	20283120	RES CMF 1/8W 5% OR
JT128	200473	20283320	RES CMF 1/10W 5% OR
JT129	207711	20283120	RES CMF 1/8W 5% OR
JT140	205408	80440510	RES CMF 1/10W 2% .OR
JT141	205408	80440510	RES CMF 1/10W 2% .OR
JT180	207711	20283120	RES CMF 1/8W 5% OR
JT182	207711	20283120	RES CMF 1/8W 5% OR
JT183	207711	20283120	RES CMF 1/8W 5% OR
JT185	200473	20283320	RES CMF 1/10W 5% OR
JT186	207711	20283120	RES CMF 1/8W 5% OR
JT203	205408	80440510	RES CMF 1/10W 2% .OR
JT206	200473	20283320	RES CMF 1/10W 5% OR
JT207	200473	20283320	RES CMF 1/10W 5% OR
JT208	200473	20283320	RES CMF 1/10W 5% OR
JT209	200473	20283320	RES CMF 1/10W 5% OR
JT220	207711	20283120	RES CMF 1/8W 5% OR
JT401	200473	20283320	RES CMF 1/10W 5% OR
JT403	212391	20223980	RES CMF 1/10W 5% 1K
JT405	212391	20223980	RES CMF 1/10W 5% 1K
JT406	212391	20223980	RES CMF 1/10W 5% 1K
JT407	212391	20223980	RES CMF 1/10W 5% 1K
JT413	231900	20364830	FILTER EMI
JT414	200473	20283320	RES CMF 1/10W 5% OR
JT415	212399	20224570	RES CMF 1/10W 5% 100R
JT416	212391	20223980	RES CMF 1/10W 5% 1K
JT421	212391	20223980	RES CMF 1/10W 5% 1K
JT426	212391	20223980	RES CMF 1/10W 5% 1K
JT427	212391	20223980	RES CMF 1/10W 5% 1K
JT429	212391	20223980	RES CMF 1/10W 5% 1K
JT430	212391	20223980	RES CMF 1/10W 5% 1K
JT442	231900	20364830	FILTER EMI
JT445	231900	20364830	FILTER EMI
JT446	200473	20283320	RES CMF 1/10W 5% OR
JT447	212391	20223980	RES CMF 1/10W 5% 1K
JT452	212391	20223980	RES CMF 1/10W 5% 1K
JT453	231900	20364830	FILTER EMI
JT454	231900	20364830	FILTER EMI
JT455	212391	20223980	RES CMF 1/10W 5% 1K
JT456	200473	20283320	RES CMF 1/10W 5% OR
JT459	212391	20223980	RES CMF 1/10W 5% 1K
JT464	231900	20364830	FILTER EMI
JT480	231900	20364830	FILTER EMI
JT483	211623	20224230	RES CMF 1/10W 5% 220R
JT484	211623	20224230	RES CMF 1/10W 5% 220R
JT486	231900	20364830	FILTER EMI
JT487	231900	20364830	FILTER EMI
JT492	212391	20223980	RES CMF 1/10W 5% 1K

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
JT495	211395	20223740	RES CMF 1/10W 5% 2.2K
JT496	212391	20223980	RES CMF 1/10W 5% 1K
JT497	212391	20223980	RES CMF 1/10W 5% 1K
JV016	207711	20283120	RES CMF 1/8W 5% OR
JV028	207711	20283120	RES CMF 1/8W 5% OR
JV045	207711	20283120	RES CMF 1/8W 5% OR
JV070	207711	20283120	RES CMF 1/8W 5% OR
JV130	207711	20283120	RES CMF 1/8W 5% OR
JV131	207711	20283120	RES CMF 1/8W 5% OR
JV136	207711	20283120	RES CMF 1/8W 5% OR
JV139	207711	20283120	RES CMF 1/8W 5% OR
JV140	207711	20283120	RES CMF 1/8W 5% OR
JV141	200473	20283320	RES CMF 1/10W 5% OR
JV160	207711	20283120	RES CMF 1/8W 5% OR
JX002	207711	20283120	RES CMF 1/8W 5% OR
JX004	175324	20469450	RES CF 1/4W 5% 220R
JX005	175324	20469450	RES CF 1/4W 5% 220R
JX006	175324	20469450	RES CF 1/4W 5% 220R
JX011	200473	20283320	RES CMF 1/10W 5% OR
JX013	207711	20283120	RES CMF 1/8W 5% OR
JX015	207711	20283120	RES CMF 1/8W 5% OR
JX021	207711	20283120	RES CMF 1/8W 5% OR
JX023	207711	20283120	RES CMF 1/8W 5% OR
JX101	211623	20224230	RES CMF 1/10W 5% 220R
JX102	211623	20224230	RES CMF 1/10W 5% 220R
JZ011	207711	20283120	RES CMF 1/8W 5% OR
JZ015	207711	20283120	RES CMF 1/8W 5% OR
JZ050	207711	20283120	RES CMF 1/8W 5% OR
LS019	206179	20351960	COIL .00812UH
LS020	231099	13055490	COIL .0015UH
LS030	224993	20241810	COIL
LT028	232264	20389930	COIL 100UH
LT029	232264	20389930	COIL 100UH
LT030	232264	20389930	COIL 100UH
LT069	206173	13087570	COIL 47UH
LT101	206369	13052840	COIL 2.2UH
LT102	219306	13053010	COIL 22UH
LT103	206369	13052840	COIL 2.2UH
LT104	224997	15040010	COIL 2.7UH
LV003	211583	15040230	COIL 56UH
LV004	211585	13020650	COIL 68UH
LV005	206173	13087570	COIL 47UH
LV008	211585	13020650	COIL 68UH
LV009	224999	15040380	COIL 82UH
LV023	206174	13020590	COIL 56UH
LV036	219293	13054620	COIL 33UH
LV039	206173	13087570	COIL 47UH
LV040	206173	13087570	COIL 47UH
LV051	225500	20242260	COIL 10UH
LV060	206171	13048540	COIL 1UH
PS034	227261	42049100	RES CONTROL
QT100	211606	48079600	FILTER QUARTZ 32.768KHZ
QT101	225497	20546390	FILTER QUARTZ 16MHZ
QT102	209725	20546450	FILTER QUARTZ 14.318MHZ
QV014	227496	20546430	FILTER QUARTZ 3.579545MHZ
RN001	198707	15006730	RES CF 1/4W 5% 1K
RN022	200473	20283320	RES CMF 1/10W 5% OR
RN023	200473	20283320	RES CMF 1/10W 5% OR
RS002	219339	20222250	RES CMF 1/8W 5% 10R
RS003	211663	20222680	RES CMF 1/8W 5% 22K
RS004	212404	20224760	RES CMF 1/10W 5% 330R
RS006	212454	20223220	RES CMF 1/10W 5% 330K
RS008	212393	20224010	RES CMF 1/10W 5% 12K
RS010	212448	20223990	RES CMF 1/10W 5% 8.2K
RS011	225513	20223840	RES CMF 1/10W 5% 9.1K
RS012	212448	20223990	RES CMF 1/10W 5% 8.2K
RS013	212388	20223190	RES CMF 1/10W 5% 56K
RS014	225514	20224620	RES CMF 1/10W 10% 2.2M
RS015	212437	20224600	RES CMF 1/10W 5% 6.8K
RS016	212437	20224600	RES CMF 1/10W 5% 6.8K



## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
RS017	225515	20222980	RES CMF 1/8W 5% 1.1K	RT168	212436	20224260	RES CMF 1/10W 5% 47K
RS018	212400	20223760	RES CMF 1/10W 5% 22K	RT169	211652	20224490	RES CMF 1/10W 5% 30K
RS019	212436	20224260	RES CMF 1/10W 5% 47K	RT170	211638	20221180	RES CMF 1/8W 5% 220R
RS020	212444	20223920	RES CMF 1/10W 5% 3.6K	RT171	219340	20222850	RES CMF 1/8W 5% 180R
RS021	198719	15007830	RES CF 1/4W 5% 33K	RT200	211657	20221170	RES CMF 1/8W 5% 150R
RS022	207711	20283120	RES CMF 1/8W 5% 0R	RT201	225519	20221840	RES CMF 1/8W 5% 82R
RS023	211638	20221180	RES CMF 1/8W 5% 220R	RT203	211638	20221180	RES CMF 1/8W 5% 220R
RS024	212453	20221240	RES CMF 1/8W 5% 10K	RT204	212391	20223980	RES CMF 1/10W 5% 1K
RS025	212391	20223980	RES CMF 1/10W 5% 1K	RT212	225512	11073140	RES CMF 1/8W 1% 1.4K
RS026	212391	20223980	RES CMF 1/10W 5% 1K	RT213	226523	20224880	RES CMF 1/10W 1% 6.81K
RS027	212440	20224960	RES CMF 1/10W 5% 680R	RT214	212399	20224570	RES CMF 1/10W 5% 100R
RS028	211623	20224230	RES CMF 1/10W 5% 220R	RT300	212398	20224140	RES CMF 1/10W 5% 4.7K
RS029	212436	20224260	RES CMF 1/10W 5% 47K				
RS030	226438	20223720	RES CMF 1/10W 5% 4.7R	RV002	219344	20221630	RES CMF 1/8W 5% 680R
RS031	212406	20224590	RES CMF 1/10W 5% 5.6K	RV003	211610	20224330	RES CMF 1/10W 5% 1.1K
RS033	212453	20221240	RES CMF 1/8W 5% 10K	RV004	211611	20224970	RES CMF 1/10W 5% 820R
RS034	200473	20283320	RES CMF 1/10W 5% 0R	RV005	212398	20224140	RES CMF 1/10W 5% 4.7K
RS036	829310	15006130	RES CF 1/4W 5% 10K	RV006	212385	20224130	RES CMF 1/10W 5% 1.5K
RS038	219325	20222660	RES CMF 1/8W 5% 6.8K	RV007	211658	20222640	RES CMF 1/8W 5% 1.5K
RS039	212382	20224240	RES CMF 1/10W 5% 10K	RV008	212440	20224960	RES CMF 1/10W 5% 680R
RS040	212391	20223980	RES CMF 1/10W 5% 1K	RV009	225521	20223820	RES CMF 1/10W 5% 430R
RS041	220605	15009660 *	RES CFF .3W 5% 18R	RV010	212391	20223980	RES CMF 1/10W 5% 1K
RS042	212449	20221950	RES CMF 1/8W 5% 4.7K	RV012	212440	20224960	RES CMF 1/10W 5% 680R
RS043	211627	20221230	RES CMF 1/8W 5% 5.6K	RV013	212384	20224810	RES CMF 1/10W 5% 1.2K
RS044	212449	20221950	RES CMF 1/8W 5% 4.7K	RV014	212385	20224130	RES CMF 1/10W 5% 1.5K
RS045	212449	20221950	RES CMF 1/8W 5% 4.7K	RV016	212399	20224570	RES CMF 1/10W 5% 100R
				RV017	212436	20224260	RES CMF 1/10W 5% 47K
RT016	212398	20224140	RES CMF 1/10W 5% 4.7K	RV023	200473	20283320	RES CMF 1/10W 5% 0R
RT017	219335	20222510	RES CMF 1/8W 5% 820R	RV025	212389	20224750	RES CMF 1/10W 5% 150R
RT018	211395	20223740	RES CMF 1/10W 5% 2.2K	RV027	829347	15008410	RES CF 1/4W 5% 47K
RT020	225516	20221830	RES CMF 1/8W 5% 39R	RV030	192100	20471950	RES CMF 1/10W 5% 1K
RT021	212406	20224590	RES CMF 1/10W 5% 5.6K	RV031	192082	40438290	RES CMF 1/10W 5% 1.5K
RT028	212442	20222490	RES CMF 1/8W 5% 100R	RV032	205354	70434250	RES CMF 1/10W 5% 15K
RT029	212442	20222490	RES CMF 1/8W 5% 100R	RV033	205349	11066460	RES CMF 1/10W 5% 8.2K
RT030	212442	20222490	RES CMF 1/8W 5% 100R	RV034	202586	50886570	RES CMF 1/10W 5% 1.1K
RT100	211615	20221160	RES CMF 1/8W 5% 68R	RV035	197472	50886550	RES CMF 1/10W 5% 560R
RT101	211395	20223740	RES CMF 1/10W 5% 2.2K	RV040	211395	20223740	RES CMF 1/10W 5% 2.2K
RT102	211395	20223740	RES CMF 1/10W 5% 2.2K	RV041	212391	20223980	RES CMF 1/10W 5% 1K
RT103	206272	30942940	RES CMF 1/8W 5% 100R	RV042	225515	20222980	RES CMF 1/8W 5% 1.1K
RT105	212388	20223190	RES CMF 1/10W 5% 56K	RV043	211608	20225120	RES CMF 1/10W 5% 620R
RT106	212401	20224580	RES CMF 1/10W 5% 1.8K	RV044	212445	20224440	RES CMF 1/10W 5% 270R
RT107	219329	20221210	RES CMF 1/8W 5% 1.8K	RV045	212408	20221930	RES CMF 1/8W 5% 1K
RT108	212388	20223190	RES CMF 1/10W 5% 56K	RV046	212391	20223980	RES CMF 1/10W 5% 1K
RT109	212392	20224780	RES CMF 1/10W 5% 470R	RV047	211608	20225120	RES CMF 1/10W 5% 620R
RT110	211617	20223230	RES CMF 1/10W 5% 680K	RV048	211644	20223360	RES CMF 1/10W 5% 2K
RT111	225517	20223790	RES CMF 1/10W 10% 4.7M	RV049	197903	20471960	RES CMF 1/10W 5% 1.8K
RT112	212383	20225020	RES CMF 1/10W 5% 220K	RV052	212399	20224570	RES CMF 1/10W 5% 100R
RT113	225517	20223790	RES CMF 1/10W 10% 4.7M	RV053	201144	50886670	RES CMF 1/10W 5% 1M
RT115	212398	20224140	RES CMF 1/10W 5% 4.7K	RV054	219335	20222510	RES CMF 1/8W 5% 820R
RT116	212399	20224570	RES CMF 1/10W 5% 100R	RV055	192100	20471950	RES CMF 1/10W 5% 1K
RT117	206259	80439650	RES CMF 1/8W 5% 470R	RV056	212456	20222280	RES CMF 1/8W 5% 3.3K
RT118	211395	20223740	RES CMF 1/10W 5% 2.2K	RV058	212440	20224960	RES CMF 1/10W 5% 680R
RT124	211657	20221170	RES CMF 1/8W 5% 150R	RV059	211611	20224970	RES CMF 1/10W 5% 820R
RT125	219340	20222850	RES CMF 1/8W 5% 180R	RV060	212408	20221930	RES CMF 1/8W 5% 1K
RT126	211627	20221230	RES CMF 1/8W 5% 5.6K	RV061	225517	20223790	RES CMF 1/10W 10% 4.7M
RT127	211627	20221230	RES CMF 1/8W 5% 5.6K	RV068	212453	20221240	RES CMF 1/8W 5% 10K
RT128	212447	20223770	RES CMF 1/10W 5% 27K	RV069	212398	20224140	RES CMF 1/10W 5% 4.7K
RT129	175054	60441580	RES CF 1/4W 5% 22K	RV070	211395	20223740	RES CMF 1/10W 5% 2.2K
RT130	212453	20221240	RES CMF 1/8W 5% 10K	RV071	212449	20221950	RES CMF 1/8W 5% 4.7K
RT131	212398	20224140	RES CMF 1/10W 5% 4.7K	RV072	226443	20222580	RES CMF 1/8W 2% 100K
RT132	212449	20221950	RES CMF 1/8W 5% 4.7K	RV073	212386	20224820	RES CMF 1/10W 5% 82K
RT134	212398	20224140	RES CMF 1/10W 5% 4.7K	RV074	212408	20221930	RES CMF 1/8W 5% 1K
RT135	226440	15022570	RES MFF .4W 10% .22R	RV075	212454	20223220	RES CMF 1/10W 5% 330K
RT136	181234	60442740 *	RES MF 3W 5% 18R	RV078	215988	20221220	RES CMF 1/8W 5% 2.2K
RT137	212398	20224140	RES CMF 1/10W 5% 4.7K	RV079	215988	20221220	RES CMF 1/8W 5% 2.2K
RT138	212449	20221950	RES CMF 1/8W 5% 4.7K	RV080	212408	20221930	RES CMF 1/8W 5% 1K
RT140	201144	50886670	RES CMF 1/10W 5% 1M	RV130	829310	15006130	RES CF 1/4W 5% 10K
RT141	201144	50886670	RES CMF 1/10W 5% 1M	RV135	212400	20223760	RES CMF 1/10W 5% 22K
RT142	212382	20224240	RES CMF 1/10W 5% 10K	RV138	212448	20223990	RES CMF 1/10W 5% 8.2K
RT144	212391	20223980	RES CMF 1/10W 5% 1K	RV140	211656	20224460	RES CMF 1/10W 5% 100K
RT145	212453	20221240	RES CMF 1/8W 5% 10K				
RT146	206381	60443740	RES CMF 1/8W 5% 100K	RX002	211612	20224790	RES CMF 1/10W 5% 560R
RT147	162004	30943030	RES CMF 1/8W 5% 56K	RX004	175325	50882950	RES CF 1/4W 5% 100R
RT148	212391	20223980	RES CMF 1/10W 5% 1K	RX011	206381	60443740	RES CMF 1/8W 5% 100K
RT149	212401	20224580	RES CMF 1/10W 5% 1.8K	RX020	219343	20221370	RES CMF 1/8W 5% 75R
RT150	212398	20224140	RES CMF 1/10W 5% 4.7K	RX100	211623	20224230	RES CMF 1/10W 5% 220R
RT151	212398	20224140	RES CMF 1/10W 5% 4.7K	RX101	211623	20224230	RES CMF 1/10W 5% 220R
RT152	212398	20224140	RES CMF 1/10W 5% 4.7K	RX104	211607	20221970	RES CMF 1/8W 5% 100K
RT153	198707	15006730	RES CF 1/4W 5% 1K	RX105	212400	20223760	RES CMF 1/10W 5% 22K
RT159	212391	20223980	RES CMF 1/10W 5% 1K				
RT160	212398	20224140	RES CMF 1/10W 5% 4.7K	RZ001	211395	20223740	RES CMF 1/10W 5% 2.2K
RT167	212382	20224240	RES CMF 1/10W 5% 10K	RZ002	211395	20223740	RES CMF 1/10W 5% 2.2K

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
RZ005	209918	15009730 *	RES CFF .3W 5% 1R	BJ04	211595	67137910	CONNECTOR 4 PIN
RZ007	219335	20222510	RES CMF 1/8W 5% 820R	BK04	232570	10205520	CONNECTOR 4 PIN
RZ008	219335	20222510	RES CMF 1/8W 5% 820R	BK08	211594	67138110	CONNECTOR 8 PIN
RZ009	219335	20222510	RES CMF 1/8W 5% 820R	CJ33	211522	10140570	CAPCC 1UF Z Y5V 16V
RZ010	219335	20222510	RES CMF 1/8W 5% 820R	CK04	225482	40432740	CAPCC 560PF J N750 50V
RZ016	207711	20283120	RES CMF 1/8W 5% 0R	CK33	182466	90578090	CAP LYTC 330UF M 6.3V
RZ017	212396	20224990	RES CMF 1/10W 5% 33K	CL91	211522	10140570	CAPCC 1UF Z Y5V 16V
RZ023	212400	20223760	RES CMF 1/10W 5% 22K	DK01	206077	16012450	DIODE
RZ024	212400	20223760	RES CMF 1/10W 5% 22K	DK02	206077	16012450	DIODE
RZ026	209918	15009730 *	RES CFF 3W 5% 1R	DK03	206077	16012450	DIODE
RZ027	212382	20224240	RES CMF 1/10W 5% 10K	DK04	206077	16012450	DIODE
RZ028	212382	20224240	RES CMF 1/10W 5% 10K	DK05	206077	16012450	DIODE
RZ029	212382	20224240	RES CMF 1/10W 5% 10K	DK06	206077	16012450	DIODE
RZ047	198728	15006080	RES CF 1/4W 5% 100K	GK01	232255	20296210	DIODE LED RECORD
ST002	225016	10137610	SWITCH INPUT	GK02	232256	16010100	DIODE LED POWER
TS030	225021	16005670	TRANSISTOR AMP	GK03	232256	16010100	DIODE LED REPEAT
TS037	219349	16006290	TRANSISTOR AMP	GK04	232256	16010100	DIODE LED WAKE TIMER
TS039	219349	16006290	TRANSISTOR BUFFER	GK05	232256	16010100	DIODE LED TIME REC
TS040	206087	16007050	TRANSISTOR SWITCH	IK01	211569	20334930	IC LED PROCESSING
TT100	219349	16006290	TRANSISTOR SWITCH	IK02	226767	10291520	IC KEYBD PROCESSING
TT101	219352	16006300	TRANSISTOR VOLT BIAS	JK01	181161	50885530	RES CMF 1/8W 10% .05R
TT102	219348	16006330	TRANSISTOR AMP	JK02	181161	50885530	RES CMF 1/8W 10% .05R
TT103	225524	16006720	TRANSISTOR DIFF REGUL	JK03	181161	50885530	RES CMF 1/8W 10% .05R
TT104	219352	16006300	TRANSISTOR REGULATOR	JK04	181161	50885530	RES CMF 1/8W 10% .05R
TT105	219352	16006300	TRANSISTOR REGULATOR	JK05	181161	50885530	RES CMF 1/8W 10% .05R
TT106	206119	16007080	TRANSISTOR CAM B SW	PK01	225494	20483820	JACK VIDEO IN
TT107	206119	16007080	TRANSISTOR CAM A SW	PK02	225495	30930090	JACK AUDIO IN
TT140	206122	16005610	TRANSISTOR MTR VOLTAGE	RJ01	220616	30942930	RES CMF 1/8W 5% 75R
TT200	230763	16000560	TRANSISTOR REGULATOR	RJ04	179378	90573610	RES CMF 1/8W 5% 47K
TV003	206122	16005610	TRANSISTOR BUFFER	RJ90	181485	90573550	RES CMF 1/8W 5% 120R
TV004	206122	16005610	TRANSISTOR BUFFER	RJ91	206272	30942940	RES CMF 1/8W 5% 100R
TV005	206126	16005510	TRANSISTOR BUFFER	RK01	210243	50885660	RES CMF 1/8W 5% 39K
TV030	206122	16005610	TRANSISTOR BUFFER	RK02	210243	50885660	RES CMF 1/8W 5% 39K
TV031	206122	16005610	TRANSISTOR AMP	RK03	210243	50885660	RES CMF 1/8W 5% 39K
TV041	206122	16005610	TRANSISTOR AMP	RK04	210243	50885660	RES CMF 1/8W 5% 39K
TV044	206122	16005610	TRANSISTOR AMP	RK05	210243	50885660	RES CMF 1/8W 5% 39K
TV045	206126	16005510	TRANSISTOR REC AMP	RK06	210243	50885660	RES CMF 1/8W 5% 39K
TV049	206122	16005610	TRANSISTOR BUFFER	RK07	210243	50885660	RES CMF 1/8W 5% 39K
TV051	206122	16005610	TRANSISTOR BUFFER	RK08	210243	50885660	RES CMF 1/8W 5% 39K
TV055	206126	16005510	TRANSISTOR AMP	RK09	210243	50885660	RES CMF 1/8W 5% 39K
TV072	219349	16006290	TRANSISTOR AMP	RK10	210243	50885660	RES CMF 1/8W 5% 39K
TV073	219349	16006290	TRANSISTOR BUFFER	RK11	210243	50885660	RES CMF 1/8W 5% 39K
TV130	219349	16006290	TRANSISTOR SWITCH	RK12	206259	80439650	RES CMF 1/8W 5% 470R
TX002	219352	16006300	TRANSISTOR BUFFER	RK13	206259	80439650	RES CMF 1/8W 5% 470R
TZ002	178650	16000220	TRANSISTOR 5V REG	RK14	206259	80439650	RES CMF 1/8W 5% 470R
TZ012	195826	16007000	TRANSISTOR SWITCH	RK15	206259	80439650	RES CMF 1/8W 5% 470R
TZ018	219348	16006330	TRANSISTOR VOLT BIAS	RK16	206259	80439650	RES CMF 1/8W 5% 470R
TZ030	178650	16000220	TRANSISTOR 9V REG	RK17	206261	60443710	RES CMF 1/8W 5% 10K
				RK18	206261	60443710	RES CMF 1/8W 5% 10K
				RK91	206275	30942960	RES CMF 1/8W 5% 220R
				RL91	206380	11064770	RES CMF 1/8W 5% 4.7K
				SK01	232293	20556870	SWITCH POWER
				SK02	232293	20556870	SWITCH STOP/EJECT
				SK03	232293	20556870	SWITCH REWIND
				SK04	232293	20556870	SWITCH CHAN DN
				SK05	232293	20556870	SWITCH CHAN UP
				SK06	232293	20556870	SWITCH PICTURE
				SK07	232293	20556870	SWITCH RECORD
				SK08	232293	20556870	SWITCH FASTFWD
				SK09	232293	20556870	SWITCH PLAY
				SK10	232293	20556870	SWITCH VOL DN
				SK11	232293	20556870	SWITCH VOL UP
				TK01	219349	16006290	TRANSISTOR LED DRIVER
				TK02	219349	16006290	TRANSISTOR LED DRIVER
				TK03	219349	16006290	TRANSISTOR LED DRIVER
				TK04	219349	16006290	TRANSISTOR LED DRIVER
				TK05	219349	16006290	TRANSISTOR LED DRIVER
				ZK01	232294	20455180	IC IR RECEIVER

## CHAN/VOL KEYBOARD ASSEMBLY

CIRCUIT COMPLETE  
T13060, T13065,  
T13070, T19060  
(SEE #0213)

SK13	232293	20556870	SWITCH CHAN DN
SK14	232293	20556870	SWITCH VOL DN
SK15	232293	20556870	SWITCH CHAN UP
SK16	232293	20556870	SWITCH VOL UP

WK04	232573	10161320	CONNECTOR 4 PIN
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## FRONT PANEL ASY

CIRCUIT VCR KEYBOARD  
13TVR60, 13TVR70,  
19TVR60 (SEE #0210M)  
CIRCUIT KEYBD/DISPLAY  
T13060, T13065,  
T13070, T19060  
(SEE #0210M)

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
<b>TUNER ASY</b>			
NZ001	232267	20315660	TUNER COMPLETE-FE4310
	232302	2016102A *	CONNECTOR, ANTENNA
	232303	2016313A	COVER, TUNER TOP W/LOGO
	232304	2016315B	COVER, TUNER BOTTOM
<b>MECHANICAL ASSEMBLY-VCR SECTION</b>			
BP01	232786	2041285A *	CABLE, AC CORD (BLK) 13TVR60, 19TVR60, T13060, T13065, T19060
BP01	235517	20555200 *	CABLE, AC CORD (WHT) 13TVR70, T13070
B410	226426	20187170	BLOCK, LOADING ASY W/MOTOR
B424	224917	20187240	MOTOR, LOADING
B432	226473	20187290	SWITCH
B440	225326	20187330	GEAR
B450	225327	20187320	GEAR
B470	225328	20187440	GEAR, TAKEUP LOADING
B490	225329	20187510	SLIDER, LOADING
B500	207642	90372000	RETAINER
B560	224918	20188690	MOTOR, CAPSTAN
B570	207611	70145500	SCREW, 2.6MM X 6MM
B580	224919	20188720	BELT
G001	229328	10297590	HEADWHEEL
G010	225560	20188770	PLATE
G020	224940	20341110	SCREW, 2.6MM X 5MM
G021	231095	20340960	SCREW, 2.6MM X 5MM
G030	226488	20188780	PLATE
G040	231095	20340960	SCREW, 2.6MM X 5MM
G060	224942	20199230	SCREW,
G100	212251	90541201	SCREW,
G410	225330	20186490	GUIDE
G420	225331	20186510	GUIDE
G450	225332	20186630	GUIDE, TAKEUP SLIDER
G480	226593	20296280	HEAD, AC ASY
G502	225333	20186740	BASE, AC ASY
G504	227490	20292990	SPRING
G506			NON-STOCKED PART
G510			NON-STOCKED PART
G520	225334	20186760	LEVER, GUIDE
G530	224943	20188740	HEAD, FULL ERASE
G560	224944	20187020	LEVER
G580	225335	20187120	BRACKET
G590	225336	20187150	SPRING
G680	226517	20188830	CLEANER, HEAD
G690	224945	10162600	BRUSH
G700	224946	20277060	WASHER
K110	226444	20186110	REEL, SUPPLY
K130	224956	20186210	WASHER
K140	224957	20186220	REEL, TAKEUP
K170	224956	20186210	WASHER
K180	225337	20186280	ARM, IDLER
K200	225338	20186460	GEAR, PULLEY
K220	226446	20284190	RETAINER
K222	226446	20211090	WASHER
K223	227323	20242370	POST
K226	231878	20244370	SCREW, 2.6MM X 6MM
K242	225339	20186810	LEVER, TENSION
K252	225340	20186840	BRAKE, BAND
K254	225341	20186860	HOLDER, BAND
K260	231879	20392370	SPRING
K270	225343	20186910	HOOK, TENSION LEVER
K280	225344	20186920	LEVER, HOOK
K290	225345	20186930	LEVER, TENSION DRIVE
K320	224987	20187580	LEVER
K330	225346	20187710	BRAKE, MAIN
K340	225347	20187730	BRAKE, TAKE-UP (MAIN)
K350	225325	20187740	SPRING

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
K360	225348	20187620	LEVER, SUPPLY BRAKE
K370	225349	20187760	SPRING
K380	225350	20187770	BRAKE, TAKE-UP (SOFT)
K390	225351	20187910	SPRING
K402	225352	20187640	LEVER, DRIVE
K410	225353	20187920	SLIDER, CAM
K420	225354	20187930	SPRING
K430	225355	20187650	LEVER, IDLER UP/DN
K440	225356	20187660	LEVER, IDLE KICK
K450	225357	20187940	LEVER, IDLE CENTER
K470	224988	20188190	LEVER, CAM
K480	225358	20188080	SLIDER, FL DRIVER
K490	225359	20188090	TRAY, CASSETTE
K530	225360	20187540	ARM, DRIVE
K550	225361	20188520	GEAR, LEVER DRIVE
K562	225362	20188530	LEVER, ARM BRAKE
K564	225363	20188540	SPRING, ARM BRAKE
K570	225364	20188550	BRACKET, TOP
K580	225365	10149540	SCREW, 3MM X 5MM
K590	224989	20188570	LEVER, DOOR OPEN
MT001	232299	20367990	STATOR
MT100	225005	20201780	HOLDER, LED
MT103	231114	20195450	HOLDER, START SENSOR
MT104	231115	20195440	HOLDER, END SENSOR
NZ001			SEE TUNER ASY
U501A	231107	20341090	SCREW
0005M	233703	20536120	● CIRCUIT, VCR MAIN 13TVR60, 13TVR70, 19TVR60
0005M	232568	20536150	● CIRCUIT, VCR MAIN T13060GY, T13065, T13070, T19060
0010			NON-STOCKED PART
0030	232291	20211050	SPRING, TUNER GROUND
0056	224907	20176570	SPRING
0060			NON-STOCKED PART
0060M	232305	20361220	PANEL, BACK
0080	209729	50109000	SCREW, 4MM X 12MM
0080M	212247	60166300	SCREW, 3MM X 6MM
0100	226483	20199570	STOPPER
0120	224909	20273840	SPRING
0170	207610	60148000	SCREW, 3MM X 8MM
0200	219178	20060090	SCREW, 3MM X 10MM
0210M	232292	20536050	● CIRCUIT KEYBD/DISPLAY 13TVR60, 13TVR70, 19TVR60
0210M	232569	20536060	● CIRCUIT KEYBD/DISPLAY T13060, T13065, T13070, T19060
0213	232572	20536070	CIRCUIT CHAN/VOL KEYBD T13060, T13065, T13070, T19060
0260	232309	20361260	COVER, BOTTOM
0275	219176	20103580	SCREW, 3MM X 16MM
0290	232310	20361250	COVER, TOP
0300	219178	20060090	SCREW, 3MM X 10MM

## REMOTE TRANSMITTER

TRANSMITTER, COMPLETE  
(SEE INCLUDED ACCESS)BATTERY, 1.5V AAA  
(NOT STOCKED)COVER, BATTERY  
CRK230A, B, CLCOVER, BATTERY  
CRK230AWCOVER, BATTERY  
CRK231B

## REPLACEMENT PARTS (Continued)

(See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
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## SERVICING AIDS

144386	VFK0134	• ADAPTER, TORQUE GAUGE, USE W/GAUGE MODEL NO. 600ATG
146918	VKF0180	• CHUCK, FOR 144396 GAUGE (MODEL 600ATG ONLY)
147002		• DRIVER, HEX KEY 1.5MM
146917		• DRIVER RF ADJ TOOL
144396	VFK0133	• GAUGE, TORQUE W/ADAPTER
147001	7099001	• JIG, REEL TABLE HEIGHT
156391	7099111	• METER, BACK TENSION TEST TAPE
184949	7099279	• PLATE, HEIGHT REFERENCE
153829	7099059	• SCREWDRIVER, JEWELER 0.8MM SHAFT
156504	7099108	• TAPE, MONOSCOPE/7KHZ (MONO)
192847	7099109	• TAPE, COLOR BARS/1KHZ (MONO)
156502	7099110	• TAPE, MULTIBURST/3KHZ (STEREO)
156501	7099108	• TAPE, KIT OF 3 (MONOSCOPE, COLOR BARS & MULTIBURST)
144297	XWXV3D54	• WASHER 3.2MM ID .5MM THICK REEL HEIGHT ADJUST 10/PKG
152460	XWXV3A6	• WASHER, 3.2MM ID .25MM THICK REEL HEIGHT ADJUST 5/PKG

## SERVICING MATERIALS

147347	7099011	• GREASE, VCR MECHANISM
199076		• KIT, INCLUDING ALL LUBES & CLEANING MATERIALS
147468	7099012	• OIL, VCR MECHANISM
194359		• TIP, USED WITH SOLDER CREAM APPLICATOR, 2/PKG
145871	3415	• WIPES, 5 X 8-1/2 INCH

## INCLUDED ACCESSORIES

193983	15045850	* ADAPTER, 75-300 OHM (BLK) 13TVR60, 19TVR60, T13060, T13065, T19060
232919	20555560	* ADAPTOR, 75-300 OHM (WHT) 13TVR70, T13070
220689	1070670A	ANTENNA, VHF/UHF (BLK) 13TVR60, 19TVR60, T13060, T13065, T19060
232920	20552580	ANTENNA, VHF/UHF (WHT) 13TVR70, T13070
	2051108A	BOOK, INSTRUCTION 13TVR60 (ENG/SPAN)
	20563700	BOOK, INSTRUCTION 13TVR60 (FRENCH)
	20511190	BOOK, INSTRUCTION 13TVR70
	2051108A	BOOK INSTRUCTION 19TVR60 (ENG/SPAN)
	20558850	BOOK INSTRUCTION 19TVR60 (FRENCH)
	20511200	BOOK, INSTRUCTION T13060
	20652960	BOOK, INSTRUCTION T13065
	15155550	BOOK, INSTRUCTION T13065 (FRENCH)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
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		20511210	BOOK, INSTRUCTION T13065 (ENG/SPAN/FR)
		20511220	BOOK, INSTRUCTION T13070
		20650110	BOOK, INSTRUCTION T13070 (FRENCH)
		20650130	BOOK, INSTRUCTION T13070 (SPANISH)
		20511230	BOOK, INSTRUCTION T19060
CRK230A	231536	20376370	TRANSMITTER, COMPLETE (BLK) 13TVR60, 13TVR70, 19TVR60 (SEE NOTE @)
CRK230AW	232347	20441990	TRANSMITTER, COMPLETE (WHT) 13TVR70 (SEE NOTE @)
CRK230B	221371	20501570	TRANSMITTER, COMPLETE T13060
CRK230CL	235442	20572550	TRANSMITTER, COMPLETE T13065, T19060
CRK231B	221374	20376390	TRANSMITTER, REMOTE T13070